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EIGHTH ANNUAL REPORT

UNIVERSITY OF MARYLAND

EXTENSION SERVICE

FOR THE

YEAR 1922.

Co-operative Extension Work in Agriculture and Home Economics, Extension Service, University of Maryland and the United States Department of Agriculture Co-operating.

T. B. SYMONS, Director.

Distributed in furtherance of Acts of Congress of
May 8 and June 30, 1914.

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Calvert	*J. H. Drury	Chaney
Caroline	*W. C. Thomas	Denton
Carroll	*F. W. Fuller	Westminster
Cecil	*A. D. Radebaugh	Elkton
Charles	*J. P. Burdette	La Plata
Dorchester	*E. W. Montell	Cambridge
Frederick	*John McGill, Jr.	Frederick
Garrett	*W. C. Jester	Oakland
Harford	*B. B. Derrick	Bel Air
Howard	*M. H. Fairbank	Ellicott City
Kent	*H. B. Derrick	Chestertown
Montgomery	*W. C. Snarr	Rockville
Prince George's	*W. B. Posey	Upper Marlboro
Queen Anne's	*O. C. Jones	Centerville
St. Mary's	*G. F. Wathen	Loveville
Somerset	*C. Z. Keller	Princess Anne
Talbot	*E. P. Walls	Easton
Wicomico	*G. R. Cobb	Salisbury
Washington	*M. D. Moore	Hagerstown
Worcester	*E. I. Oswald	Snow Hill
Harford	*G. R. Stuntz (Asst. Co. Agt.)	Bel Air

* In co-operation with U. S. Department of Agriculture.

† Devoting part time to Extension Work.

(Continued on Third Cover Page).

LETTERS OF TRANSMITTAL.

DR. A. F. WOODS,
President:

I have the honor to submit herewith the Eighth Annual Report covering the work of the Extension Service of the University of Maryland, in co-operation with the U. S. Department of Agriculture, for the calendar year 1922, together with a financial report for the fiscal year ending June 30, 1922.

Respectfully submitted,
THOMAS B. SYMONS,
Director, Extension Service.

College Park, Md.,
January 1, 1923.

HON. S. M. SHOEMAKER,
Chairman, State Board of Agriculture:

In accordance with the requirements of the Act of Congress, approved May 8, 1914, and known as the Smith-Lever Act, I have the honor to transmit herewith, for submission to the Governor of the State, the Eighth Annual Report covering the work of the Extension Service of the University of Maryland, in co-operation with the U. S. Department of Agriculture, for the calendar year 1922, together with a financial report for the fiscal year ending June 30, 1922.

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A. F. WOODS,
President.

College Park, Md.,
January 1, 1923.

TO HIS EXCELLENCY ALBERT C. RITCHIE,
Governor of Maryland:

I have the honor to transmit herewith the Eighth Annual Report covering the work of the Extension Service of the University of Maryland, in co-operation with the U. S. Department of Agriculture, submitted to me through the President of the University.

Respectfully submitted,
S. M. SHOEMAKER,
Chairman, State Board of Agriculture.

Baltimore, Md.
January 1, 1923.

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Director, Extension Service.

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January 1, 1923.

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Baltimore, Md.
January 1, 1923.

MARYLAND AGRICULTURAL EXTENSION WORKERS IN ANNUAL CONFERENCE AT THE UNIVERSITY OF MARYLAND IN JANUARY, 1923.

EIGHTH ANNUAL REPORT

OF THE

UNIVERSITY OF MARYLAND

EXTENSION SERVICE

FOR THE YEAR 1922.

By THOMAS B. SYMONS, *Director.*

INTRODUCTION.

From an economic standpoint, the year 1922 has been one of disappointment to the farmers of Maryland. Prices for farm products, which began their rapid downward plunge during 1920, have remained low and apparently have reacted but little in sympathy with the prosperity that has been so noticeable in virtually all other lines of industry.

The disappointment on the part of the farmers has been all the greater because they approached the season of 1922 with enthusiasm and with some degree of hope that the deflation period had passed. High prices were certainly not anticipated, and yet the expectation was prevalent that the returns from agriculture would be adequate to cover the cost of production and to provide a reasonable remuneration for the labor expended. This proved not to be the case. The disparity between prices of farm products and industrial products continued wide. The problem of meeting expenses and maintaining customary standards of living remained a serious one throughout the year with many of our farm owners and more particularly with many of our tenant farmers.

The situation of the past season served merely to aggravate conditions that unfortunately have been pressing heavily on the farmers for the past three years. Much of the progress that might have taken place in the agriculture of the State during that period has been rudely checked. In fact, it is to some extent true that agriculture has dragged out an existence during the past three years at the expense of its living standards and its productive plant, such as buildings, fences and soil fertility.

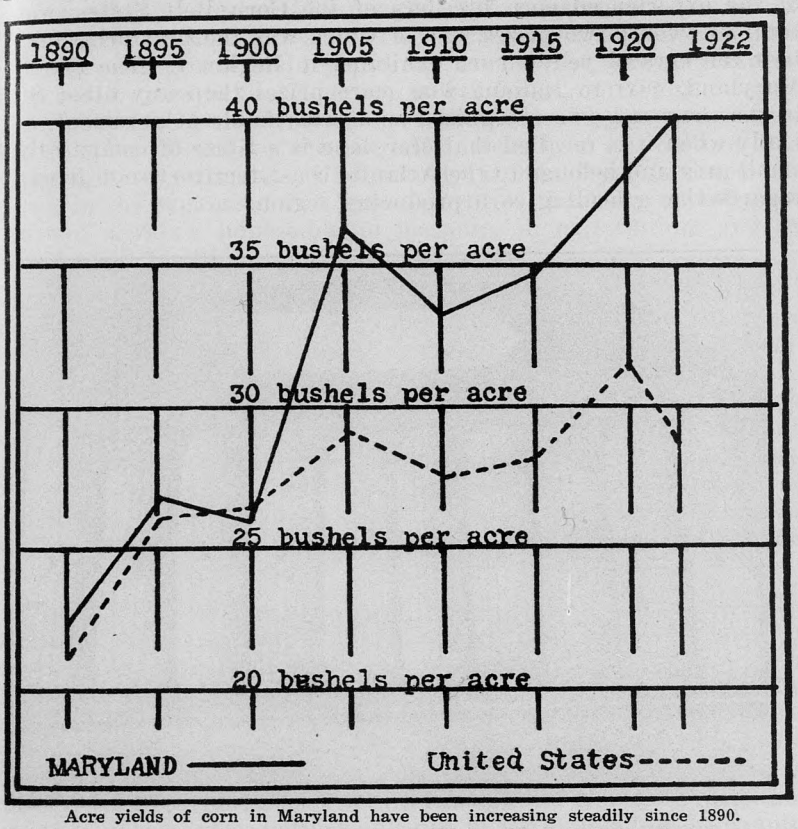
Notwithstanding conditions that have seemed almost like unjust discrimination against agriculture, farmers have not gone on strike but have continued to produce large crops. It is a high tribute to their perseverance, to their sensible recognition of economic factors, and to their ability to adjust themselves and their business to trying conditions that they have "kept faith" with the Nation during a period when their purchasing power has been less than two-thirds of what it was in 1913.

Not only have the farmers of Maryland continued to produce in undiminished quantity but they have continued to make a steady progress along the lines of more efficient agriculture. It is needless to say that this progress would have been far more rapid if prosperity rather than depression had prevailed since 1920. Nevertheless, the serious difficulties under which agriculture everywhere

MARYLAND

has labored, but add to the significance of the real achievements which Maryland farmers have accomplished.

There is no more striking illustration of the character of the progress which agriculture in the State has been making than the record of the acre yields of corn for the past thirty-two years. Ever since 1890, when the average yields of corn per acre in Maryland were between 20 and 25 bushels, Maryland farmers have steadily and consistently been improving the quality of their seed and their cultural methods until in 1922 the average yield mounted to the top figure of 40 bushels per acre. This is 12 bushels higher than the



Acre yields of corn in Maryland have been increasing steadily since 1890.

average of the United States for the same year and nearly 18 bushels above the average production of the State 32 years ago. It shows that merely by applying better cultural methods, the farmers of Maryland have been enabled to raise on 635,000 acres, which was the acreage planted in 1922, 11,430,000 more bushels of corn than would have been possible in 1890. It shows that at 68 cents a bushel, the farm price for corn during December, the leading agricultural crop of the State has been increased in value by more than $7,500,000. The remarkable, steady upward trend of corn yields in Maryland is shown in the above chart.

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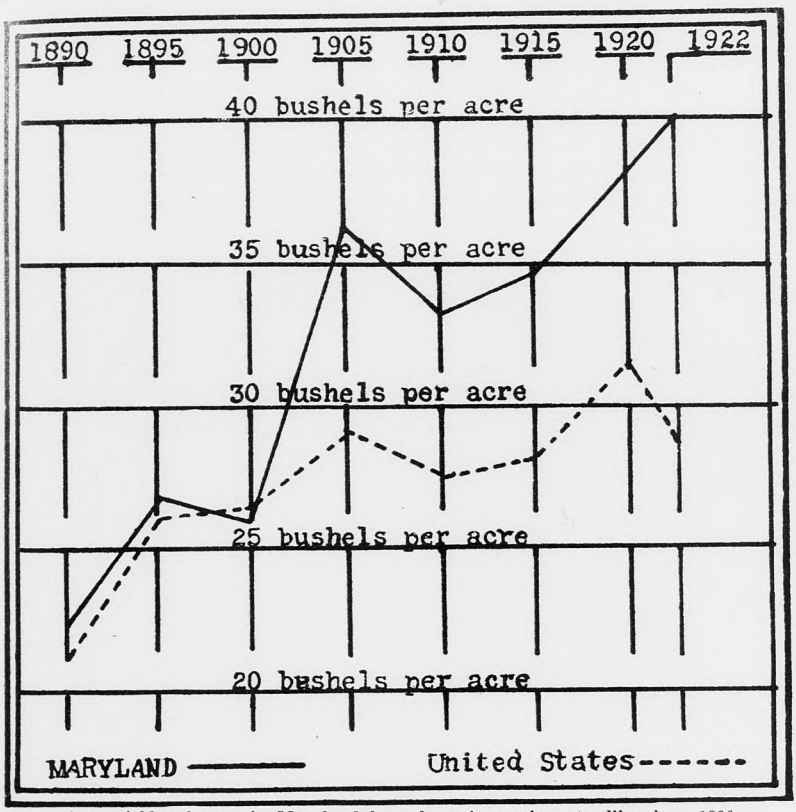

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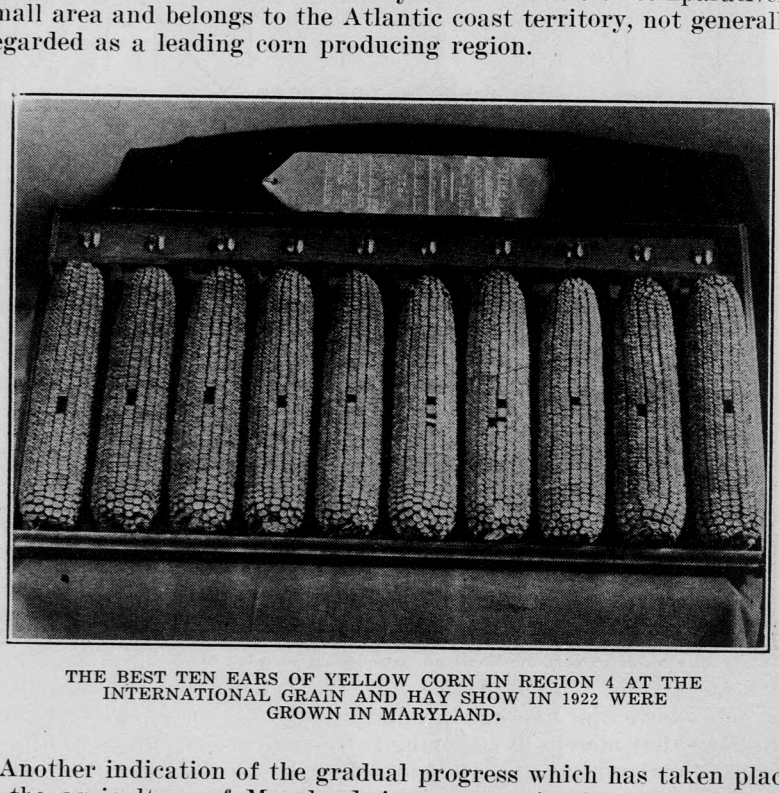
Side by side with this progress which the average farmer of Maryland has made in the production of corn, is the no less noteworthy achievement which has been accomplished in the State in the production of pure-bred seed corn. The production of high yielding strains of pure-bred seed corn has become an important business, particularly in Harford and Cecil counties. Recognition of the skill and ability which Maryland growers have developed in this industry during recent years came in unmistakable terms during 1922, when entries from this State in the International Grain and Hay Show at Chicago, competing against the finest exhibits of the experienced corn breeders of the Corn Belt States, won a total of twenty-two prizes, one of which was the first prize for the best ten ears of yellow corn exhibited in Region 4. The fact that Maryland, next to Indiana won more prizes than any other State in the show must be recognized as a remarkable achievement, especially when it is recalled that Maryland is a State of comparatively small area and belongs to the Atlantic coast territory, not generally regarded as a leading corn producing region.



THE BEST TEN EARS OF YELLOW CORN IN REGION 4 AT THE INTERNATIONAL GRAIN AND HAY SHOW IN 1922 WERE GROWN IN MARYLAND.

Another indication of the gradual progress which has taken place in the agriculture of Maryland, is apparent in the constantly increasing acreage being devoted to the legume crops. Unfortunately figures are not available to show just how great this increase has been in the past year. Elsewhere in this report it is estimated that the area planted to soybeans alone during 1922 totaled 40,000 acres. While this is only an estimate, it is a well known fact that

legume crops, and particularly soybeans, have come to occupy an increasingly prominent place in the agriculture of the State. In Southern Maryland, Japan Clover has been introduced and is meeting a long felt want. In other parts of the State, alfalfa is now regarded as a crop of prime importance and is being grown more extensively. Clovers and cowpeas have also been planted in increasing quantities. An indication of the growing favor of legume crops in the State during recent years can be obtained from a glance at the Census figures which show that for clover the acreage during the ten years between 1909 and 1919 increased from 26,545 acres to 41,250 acres, or 55.4 per cent.; that for alfalfa the acreage increased from 3,188 acres to 11,909 acres, or 273.6 per cent., and that for small grains and legumes cut for hay the acreage increased from 8,846 acres to 21,471 acres, or 142.7 per cent. This increase in legume crops has continued since the Census figures were taken. What it has meant to the increased wealth of agriculture it is impossible to estimate. Undoubtedly it has been an important factor in the expansion and improvement of the dairy industry and has had a value, impossible to measure, in maintaining and improving soil fertility.

Another very marked advance in the agriculture of the State is apparent in the position which Maryland now occupies in the production of vegetables. Notwithstanding the comparatively small area of the State, Maryland is now third in the acreage devoted to vegetables, exclusive of white and sweet potatoes, raised for sale. Nearly 120,000 acres of land in Maryland are now annually devoted to the commercial production of vegetables, other than white and sweet potatoes, indicating that farmers are taking advantage of the State's proximity to large nearby markets and engaging more generally in the production of the higher valued agricultural products.

Closely linked to the expansion of this phase of agriculture, has been the growth of the canning industry and the consequent increase in the acreage devoted to canning crops. While the canning industry in the State has been subjected to severe financial strain during the past few years and economic conditions have seriously curtailed the production of canning crops, the State has, nevertheless, maintained its rank as one of the leading States in this important industry. Moreover, the past year, although not a notably profitable one, has witnessed a distinct advance in the production of canning crops, because of the increased attention directed to reducing production costs. Attention has particularly been centered on the tomato crop, the largest and most important of the canning crops, through successful demonstrations which have illustrated how larger acre yields can bring down the cost of production to meet prevailing economic conditions. Every effort is being made to extend the scope of this work throughout the State and on its results may rest the future prosperity of the canning industry in Maryland.

Most important to the welfare of the State during the recent period of depression has been the sound foundation on which the dairy industry has been placed. The progress in this industry has been safe and conservative and it is a noteworthy fact in communities where a general system of farming has been practised that dairying has served as the principal buffer against the effects of hard times. Not a little of the success which has come to this industry has been due to the substantial organizations which have been erected around it. During the past year the advancement in the industry has continued. Organizations have been strengthened, better producing animals have been introduced and the whole industry has gone forward, despite the fact that it, too, has felt the ill effects of lowered prices.

THESE HARFORD COUNTY CLUB BOYS WERE FIRST IN THE DAIRY CATTLE JUDGING CONTEST AT THE NATIONAL DAIRY SHOW IN 1922 AND GAVE MARYLAND THE DISTINCTION OF WINNING TWO NATIONAL JUDGING CONTESTS IN SUCCESSION.

Not all of the progress of agriculture during the past year has been of a material character. One of the most important forward steps in the State has been the formation of farm bureaus in many of the counties. While it is true that farm organizations previously existed in many counties and had performed worth while services, it is also true that the farm bureau movement has spread the influence of organization to greater numbers, has increased the confidence in the benefits of organization and has stim-

ulated numerous co-operative activities. This has been accomplished in harmony with other important existing farm organizations in the State and the year 1922 must be regarded as a most auspicious one from the organization standpoint.

Progress of a slightly different character, but of no less significance is noted in the record of the agricultural club boys who won the dairy cattle judging contest at the National Dairy Show last October. This victory, which belongs to the younger generation, following on the heels of the record made the previous year by another team which was awarded the coveted trip to Europe in a livestock judging contest at Atlanta and later defeated an English team in a similar contest at Cambridge, England, indicates that the progress in agriculture is not confined to the realms of the adult. It is, however, an indication that knowledge is reaching out to agriculture in all its branches and that the great industry is forging steadily ahead despite its numerous difficulties.

It is probably true that the University of Maryland, both through the Experiment Station and the Extension Service, has been able to render a greater service and a more appreciated service during the past few years than ever before in its history. The times were such as to call for modifications of farming methods, changes in rotations of crops, and the employment of every factor looking to economical production and the husbanding of resources. Conditions called for expert knowledge, expert advice and proven, careful practice; and it is gratifying to know that farmers and homemakers have made increasing demands upon the Service, thereby showing their confidence in the institution and appreciation of its efforts.

Crop Yields For 1922.

Notwithstanding the high costs of production and the low prices, the farmers of Maryland have produced as good crops as weather conditions would permit.

The following figures give the crop yields and values for the past two years, as arranged by the Bureau of Agricultural Economics, U. S. Department of Agriculture:

Maryland Crop Statistics, December 1, 1922.

	1921	1922
1. CORN		
Acres	645,000	635,000
Yield per acre	39	40
Total production	25,155,000	25,400,000
Price, Dec. 1	$ .49	$ .68
Total farm value	$12,326,000	$17,272,000
Value per acre	$19.11	$27.20
2. WHEAT		
Acres	590,000	578,000
Yield per acre	14	16.5
Total production	8,260,000	9,537,000

Price, Dec. 1	$ 1.03	$ 1.12
Total farm value	$8,508,000	$10,681,000
Value per acre	$ 14.42	$ 18.48

3. HAY

Acres	390,000	406,000
Yield per acre, tons	1.35	1.62
Total production, tons	526,000	658,000
Price, Dec. 1	$ 15.10	$ 18.50
Total farm value	$7,943,000	$12,173,000
Value per acre	$ 20.38	$ 29.97

4. RYE

Acres	17,000	17,000
Yield per acre	14	15.2
Total production	238,000	258,000
Price, December 1st	$ .92	$ 1.10
Total farm value	$ 219,000	$ 284,000
Value per acre	$ 12.88	$ 16.72

5. OATS

Acres	60,000	58,000
Yield per acre	27	30
Total production	1,620,000	1,740,000
Price, December 1st	$ .45	$ .51
Total farm value	$ 729,000	$ 887,000
Value per acre	$ 12.15	$ 15.30

6. WHITE POTATOES

Acres	49,000	51,000
Yield per acre	65	101
Total production	3,185,000	5,151,000
Price, December 1st	$ 1.10	$ .60
Total farm value	$3,504,000	$ 3,091,000
Value per acre	$ 71.50	$ 60.60

7. SWEET POTATOES

Acres	9,000	10,000
Yield per acre	100	153
Total production	900,000	1,530,000
Price, December 1st	$ 1.40	$ .50
Total farm value	$1,260,000	$ 765,000
Value per acre	$ 140.00	$ 76.50

8. TOBACCO

Acres	26,000	35,000
Yield per acre (lbs)	715	770
Total production (lbs)	18,590,000	26,950,000
Price, December 1st	$ .19	$ .17
Total value (farm)	$3,532,000	$ 4,581,000
Value per acre	$ 135.85	$ 130.90

SUMMARY

Acres in all crops	1,981,000	1,986,000
Value of all crops	$48,421,000	$64,588,000

ADMINISTRATION.

The administration of the Extension Service has been conducted as heretofore. There has been no change in the personnel of supervisory officials. It was hoped that we would be able to employ a district agent for men's work, but funds would not permit. Splendid co-operation exists among our forces and good progress has been made in the development of programs or work and leaders to carry out community projects.

The relations of the service to other departments and divisions of the Institution are the most cordial and there is mutual co-operation. A free exchange in assistance during stressing periods is practiced and yet it is the rule to have whole-time men for each class of work. As the agricultural activities of the State are placed under one board — the State Board of Agriculture — which also serves as the Board of Regents for the University, there are no difficulties in jurisdiction in the conduct of our work.

Our relations with the State Department of Public Instruction are co-operative and working agreements in several counties for the conduct of boys' and girls' club work aid in the development of the club programs.

Relations With Farm Organizations.

The relations of the Service with all the State farm organizations have been sympathetic and helpful. In no case has the Service made discrimination. As a public educational agency supported wholly from public funds, the policy has been to co-operate and serve all farm organizations.

The Director for some time, by force of circumstances, has held the position of secretary of the Maryland Agricultural Society, a publicly supported organization. Recent developments in organization work in the State, as referred to in the introduction, will, I am sure, provide means whereby the Society will secure a full-time Secretary. This will permit me to withdraw and allow me to assume the proper position of not holding office in any farm organization.

The work of the Society in the past has been wholly educational, having affiliated with it the six educational commodity organizations, all of which have greatly aided in promoting the industries they represent. It is hoped that these organizations will continue to be associated with the reorganized Society.

The Service has aided as far as possible in the development of Grange work in its relation to community building and other social and educational activities.

Up to this time there has been no division among the agricultural forces in the State and this unity has been a great help in developing a State-wide agricultural program.

Sources of Extension Revenue.

During the fiscal year ending June 30, 1922 there were available for Extension Work the following funds: Federal Smith-Lever, $50,642.34; State Smith-Lever, $40,642.34; U. S. Department of Agriculture (regular), $19,900; Supplementary Extension Fund, (Federal), $16,934.31; County Demonstration Fund, $48,000; State funds for General Extension, $8,637.71; State Horticultural Fund, $8,000, and about $32,000 contributed by the various counties, or a total of $224,756.70.

During the present fiscal year, ending June 30, 1923, there is available: Federal Smith-Lever, $56,287.11; State Smith-Lever, $46,287.11; U. S. Department of Agriculture (regular), $19,201; Supplementary Extension fund (Federal), $14,676.40; County Demonstration Fund, $48,000; State Fund for General Extension, $12,500; State Horticultural Fund, $8,000, and about $35,000 contributed by the various counties, or a total of $239,951.62.

A detailed statement of the expenditure of the funds available for the fiscal year ending June 30, 1922, will be appended to the published report.

Notwithstanding the economic situation and the universal demand for a reduction of taxes by farmers, there has been no falling off in the appropriations for county agent work in any of the counties. In fact, there is a reasonable increase over last year's county appropriations. This, it is felt, is a tribute to the efficiency of the service, as no agency is so responsive to public demands as is the County Board of Commissioners. We have established what we believe to be a wise policy in having the agents supported only from public funds, viz:—federal, state and county appropriations.

Changes In Personnel.

The following changes in personnel have occurred during the past year: Miles H. Fairbank appointed county agent in Howard county April 17th to succeed R. L. Post, who resigned February 28th; John McGill, Jr., appointed county agent in Frederick county July 1st to succeed P. A. Hauver, who resigned June 15th; W. C. Rhode appointed county agent in Baltimore county June 5th to succeed E. E. McLean, who resigned June 30th; Edgar W. Montell appointed county agent in Dorchester county July 1st to succeed P. W. Moore, who resigned June 30th; Stanley E. Day resigned as county agent in Washington county September 17th; W. C. Travers, horticultural inspector, died January 15th; G. S. Langford and P. D. Sanders were appointed in September and October, respectively, to devote part time to this class of work. W. H. Rice was appointed poultry specialist October 23rd. S. H. De Vault appointed as assistant marketing specialist August 1st.

Miss Blanche A. Corwin appointed as home demonstration agent in Montgomery county April 4th to succeed Miss C. M. Cowsill, who resigned January 31st. Miss Annie M. Holbrook appointed as

home demonstration agent in Harford county July 1 to succeed Miss Blanche Gittinger who resigned May 31st. Miss Emily C. Kellogg appointed as home demonstration agent in Caroline county March 1st to succeed Mrs. E. G. Norman, who resigned October 11, 1921. Miss R. Elizabeth Van Scoter appointed as home demonstration agent in Dorchester county February 1st to succeed Mrs. E. Celeste Moore, who resigned December 10th. Miss Florence H. Mason appointed as home demonstration agent in Wicomico county October 1st to succeed Miss Clara S. Mullen, who resigned June 30th. Miss Elizabeth R. Thompson appointed as home demonstration agent in Frederick county August 21st to succeed Miss Frances E. Gerber, who resigned August 19th. Miss Mary L. Mills resigned as home demonstration agent in Somerset county May 31st.

Increasing Efficiency Of Workers.

A special effort has been made during the past year for increasing the efficiency of our workers. Monthly conferences of the specialists are held at headquarters and group meetings of the agents in different regions of the State are held monthly. Aside from taking up a discussion of methods of work at these conferences, the specialists have outlined their programs of work more definitely and the agents have been required to submit definite programs of the extension activities in the county for the year. These county programs have been formed after consultation with the farmers' and women's organizations in the county. By this means groups of farmers interested in any particular project will assume more responsibilities in leadership and in seeing that the work is done.

A change has been made in submitting reports, in accordance with the suggestions from the States Relations Service. We have adopted the monthly reporting system. Each agent and specialist submits a monthly statistical report, together with a narrative statements of the accomplishments during the month. While there is much to be said in favor of the weekly reporting system, we believe our present system of reporting accomplishes all that is desired.

The organization of the extension office at headquarters is admirable and efficient. A splendid corps of stenographers and clerks working in the central office under the general supervision of Miss K. G. Connolly, chief clerk, serves to dispatch the work of the officials and specialists.

The keeping of records and financial accounts for the Service is a difficult task on account of the different funds, projects and fiscal requirements. A total of 44,368 first-class letters have been mailed from headquarters during the year, while the total pieces of mail sent from the office have been about 65,404.

In concluding this discussion under administration, I am glad

again to acknowledge my obligations to all members of the Service for their cordial co-operation and loyal support in directing the work of the organization.

We are also under obligations to the officers and staff of the States Relations Service of the United States Department of Agriculture for the splendid co-operation which they have given to the work in Maryland.

Publications.

The following publications have been issued by the Service during the past year: Circular No. 49, "Formulas and Schedules for Feeding Young and Partly Grown Chicks," 1 page, 3,000 copies; Circular No. 50, "Feeding Formulas for Adult Fowls with Directions for Feeding," 1 page, 3,000 copies; Circular No. 51, "Garden Culture of Sweet Peas" 2 pages, 2,000 copies; Circular No. 52, "Hot Beds and Cold Frames for Raising Tomato Plants," 2 pages, 2,000 copies; Circular No. 53, "Increasing Tomato Yields," 3 pages, 2,000 copies; Information Card No. 1 (Revised), "Directions for Using Paradichlorobenzene to Kill Peach Tree Borers," 2,500 copies; Information Card No. 2, "Control of Insect Pests in Stored Grain," 5,000 copies; Information Card No. 3, "Control of Chrysanthemum Gall Midge," 500 copies; Information Card No. 4, "San Jose Scale," 2,000 copies; Information Card No. 5, "Apple Aphids," 3,000 copies; Information Card No. 6, "European Red Mite," 2,000 copies; Bulletin, "Material for Debates," 33 pages, 500 copies; (Cut), "The Poultry House," 1,000 copies; Bulletin, "Seventh Annual Report," 48 pages, 2,000 copies; Bulletin No. 3 (Revised), "The Garden," 14 pages, 5,000 copies; Bulletin No. 11 (Revised), "Spray Calendar," 4 pages, 2,000 copies; Bulletin No. 24, "Making Pigs Pay," 52 pages, 5,000 copies; Bulletin No. 25, "Brood Sow and Her Litter," 15 pages, 3,000 copies.

In addition, the Extension Service News, a monthly publication, has been issued regularly. A total of 108,500 copies with 434,000 pages have been published.

Mr. M. D. Bowers, specialist in agricultural journalism, has rendered efficient service in preparing copy for the Extension Service News and other press matter for daily, weekly and monthly publications. He reports that the information department of the Extension Service has aimed to render service along the following lines:

1. To supply the farmer with up-to-date and reliable information which is at times urgently needed; and to supplement other sources of information, a work it is fitted to perform because of the rapidity with which it can function and the more extensive public which it is able to reach.

2. To give the public a more comprehensive knowledge of the character of the service which the agencies established by the State

and Federal Governments are prepared to render for the welfare of agriculture. It is thus able to reach beyond the rural field and to some extent, at least, gives all classes of the public an opportunity to become acquainted with the work which is being performed.

3. To give support to co-operative farm organizations and other interests engaged in promoting the State's agricultural welfare.

4. To encourage farmers to take more pride in their industry and to give the general public a clearer conception of the importance and dignity of agriculture. The Service endeavors to accomplish this result by giving due prominence to outstanding achievements of individual farmers or groups of farmers and by stressing the fundamental position which agriculture plays in the economic life of the State.

5. The fifth object which the information service has endeavored to keep in view is the establishment of a better understanding between rural and urban classes. The effort of the Service in this connection has been to point to forms of co-operation between country and city people and means whereby one group can assist the other.

In prosecuting these aims, the department has utilized the public press daily, weekly and monthly. We are indebted to the press of the State for the generous consideration it has given to all matter sent out by the service. A total of 94 news bulletins, covering 2,000 column inches; 16 county agents' notes covering 500 column inches, and 20 special articles covering 600 column inches have been clipped from papers sent in. Naturally it is impossible to assemble all printed matter, so that the above is no adequate record of the news space.

In addition to editing the Extension Service News, the department has greatly aided in putting on special campaigns, such as the improved handling of the tomato crop; garlic eradication and the use of improved strains of wheat and corn.

Mr. Bowers has supplied the "Maryland Farmer" and other papers regularly with a summary of the county agents' activities, week by week. He has greatly aided in the issuance of the "Agricultural Society News" and in various ways he has assisted the Southern Maryland Immigration Commission which is co-operating closely with the Service.

There are great possibilities in further developing the information department. It is a phase of the work that requires expert skill and constructive genius.

Projects.

The work of the Service is conducted under approved projects. These projects, covering the work of county agents and specialists, are approved by the States Relations Service, United States Department of Agriculture. In this summary discussion of the work of the service, it is impossible to give the progress made in each county. It must be understood that both agents and specialists are mutually responsible and share equal credit in the results obtained.

County Demonstration Work.

The county agent work is carried on under this project. The specialists' projects are correlated with the agents' work through practical demonstrations in the field. The county demonstration work has made unusual progress during the year. Fortunately, we have had a comparatively small turnover in agents which aids in carrying forward programs of work.

A study of the annual reports of the agents shows that they set out at the beginning of the year with definite programs for the improvement of agriculture in the various counties. These programs of work vary as to the outstanding needs of the county. The low prices for farm products have in some cases caused a change in regular rotations and a change in crops, in order to enable the farmer better to meet the economic situation.

In this connection, the county agent was never so valuable to the farmers of the State as during the past two years. The agent has been at the farmer's call for assistance during this stressing period. Fortunately, we have been able to maintain an agent in all counties which in itself demonstrates the support that the farmers are giving to the work. The farmers look to the agents to lead in all agricultural movements for the betterment of existing conditions.

Naturally, during this period of low prices and high costs, special effort has been directed by all forces toward the encouragement of co-operative effort among farmers in the purchasing of farm supplies and the selling of farm products.

The agents report splendid progress in co-operative marketing, which involves the raising of better crops and livestock, standardization and grading. These are the fundamentals of successful marketing if there is erected a proper organization through which the products can be merchandized.

During the season of 1922 the county agents report that the farmers, through their local county organizations, purchased farm supplies to the amount of $570,368.33 and sold farm products to the amount of $3,961,503.09. The estimated saving to the farmers on these transactions was $748,094.54, or about 19%.

The annual reports of the county agents show a marked improvement over past years. They show a wonderful amount of work accomplished and a splendid style of presentation. The change in submitting monthly narrative reports of both agents and

specialists affords an opportunity for comparison in the results accomplished. Due to pressure of work, the director and assistant director have not been able to visit the agents as often as we would desire, although an average of six visits to each agent was made.

During the season a total of 18,274 visits were made by the agents to farmers on their farms. Oftentimes the agents are accompanied by specialists in carrying out a joint project. Forty-nine thousand five hundred and forty-seven farmers called upon the agents at their offices for advice. The agents traveled 194,907 miles in the counties and a total of 4,273 meetings were held with an attendance of approximately 247,169.

The assistant director, Dr. Bomberger, has ably assisted in the administration and supervision of the county agent force.

Below is given the county agents who are serving in their respective counties:

County	*Name*	*Headquarters*
Allegany	R. F. McHenry	Cumberland
Anne Arundel	G. W. Norris	Annapolis
Baltimore	W. C. Rhode	Towson
Calvert	John H. Drury	Chaney
Caroline	W. C. Thomas	Denton
Carroll	F. W. Fuller	Westminster
Cecil	A. D. Radebaugh	Elkton
Charles	J. P. Burdette	La Plata
Dorchester	E. W. Montell	Cambridge
Frederick	John McGill, Jr.	Frederick
Garrett	W. C. Jester	Oakland
Harford	B. B. Derrick	Bel Air
Howard	M. H. Fairbank	Ellicott City
Kent	H. B. Derrick	Chestertown
Montgomery	W. C. Snarr	Rockville
Prince George's	W. B. Posey	Upper Marlboro
Queen Anne's	O. C. Jones	Centreville
St. Mary's	G. F. Wathen	Loveville
Somerset	C. Z. Keller	Princess Anne
Talbot	E. P. Walls	Easton
Washington	M. D. Moore	Hagerstown
Wicomico	G. R. Cobb	Salisbury
Worcester	E. I. Oswald	Snow Hill
Harford	G. R. Stenetz (Asst. County Agt.)	Bel Air
Eastern Shore	L. H. Martin (Local Agent)	Princess Anne
Southern Maryland	J. F. Armstrong (Local Agent)	Seat Pleasant.

The following summary of demonstrations and other activities gives an idea of the work reported by the county agents:

	Number of Demonstrations	*Number of Acres Involved*	*Average Yield*	*Number of Co-operators*	*Number of Acres Involved*	*Average Yield*	*Average for State*
Corn	241	2,348	61.17	1,027	17,749	51.38	30.92
Wheat	149	149½	22.92	388	6,557	17.9	13.62
Rye	26	291	21.	124	1,324	18.	13.
Oats	22	204	42.98	292	394	36.5	27.5
Other Grains	10	113	.....	39	458	.....	.....
Alfalfa	202	1,485	3.36*	592	3,021	2.79*	2.33*
Soy Beans	276	3,066	(16.55† 2.94*	1,075	8,366	15.61† 2.43*	12.85† 2.02*

Cow Peas.....	66	975	{21.25† 2.77*	335	2,832	15.66† 1.96*	12.5† 2.*
Hay, forage and cover crops.....	304	3,814¾	.....	447	3,998	.....	.....
Tobacco	41	259	1,175‡	280	2,150	.....	756¼‡
Tomatoes	135	385	257	.....	.....	.....	137†
Irish Potatoes.....	192	503½	161	.....	.....	.....	103†
Sweet Potatoes....	38	175¼	220	.....	.....	.....	142½†

*Tons.
†Bushels.
‡Pounds.

Orchards:

Eight hundred and sixty-seven instructed in the culture of 1,002,839 trees.

Horses:

Pure bred stallions purchased	3
Horses and mules cared for as directed by county agents	68

Dairy Cattle:

Pure bred bulls purchased	111
Pure bred cows and heifers purchased	266
Grade cows purchased	1705
Cows tested for profitable milk production	971
Farmers instructed in feeding methods	859
Cows owned by farmers who were instructed in feeding methods	6203

Beef Cattle:

Pure bred bulls purchased	9
Pure bred heifers purchased	5
Feeding cattle purchased	432
Feeding demonstrations conducted	3
Cattle in feeding demonstrations	75

Hogs:

Pure bred boars bought	157
Pure bred sows or gilts bought	602
Pure bred hogs sold with county agents' assistance	534
Herds of pure bred hogs established	314
Feeding demonstrations supervised	360
Number of hogs in feeding demonstrations	1,050
Farmers induced to grow grazing crops for hogs	295
Hogs cared for as advocated by county agents	4,932

Livestock Diseases and Pests:

Demonstrations in testing cattle for tuberculosis	205
Cattle tested for tuberculosis	24,833
Demonstrations in treatment for hog cholera	198
Animals in hog cholera demonstrations	5,000
Other demonstrations	401
Animals in other demonstrations	1,981

Sheep:

Pure bred rams purchased	34
Pure bred ewes purchased	59
Pure bred sheep sold with county agents' assistance	58
Grade ewes purchased for breeding purposes	122
Flocks started	21
Sheep feeding demonstrations supervised	5
Number of sheep in feeding demonstrations	245
Farmers induced to grow grazing crops	63
Sheep cared for as advocated by county agents	1,747

Poultry:

Number of poultry demonstrations	241
Poultry grown and cared for according to methods advocated by county agents	25,025

Farms on which poultry management has been improved	921
Birds on which poultry management has been improved	162,035
Communities adopting a standard variety	20
Flocks culled	119
Birds in flocks culled	24,220
Birds eliminated through culling	3,227
Farmers induced to raise standard bred poultry	79
Demonstrators induced to practice early hatching	203
Winter feeding demonstrations	51
Birds in winter feeding demonstrations	10,478
New poultry houses	105
Poultry houses remodeled	97
Fertilizers:	
Farmers advised regarding purchase of fertilizers	2,982
Fertilizer demonstrations	159
Acreage in fertilizer demonstrations	3,626
Communities influenced to purchase co-operatively	86
Amount saved by co-operative purchase	$34,899.90
Tons of fertilizer purchased co-operatively	16,028½
Farmers home-mixing fertilizer on county agents' advice	703
Manure:	
Farmers induced to care better for farm manure	955
Manure sheds built at county agents' suggestion	40
Manure spreaders purchased at county agent's suggestion	30
Silos:	
Number built as a result of county agents' advice	38
Lime:	
Number of demonstrators	113
Acres in lime demonstrations	1,980½
Farmers, other than demonstrators, using lime due to county agents' influence	788
Number of acres treated this year	9,535
Farms on which soil was tested for acidity	1,022
Lime sheds constructed	3
Number of local sources of lime developed	129
Number of lime crushers installed	2
Number of lime kilns built	10
Farm and Farmstead Improvements:	
Number of buildings erected	201
Number of farm buildings improved	160
Number of new building plans furnished	39
Number of farm buildings painted or whitewashed	340
Number of home water systems installed or improved this year	52
Total number of such systems in county now	1,747
Number of windmills erected this year	16
Number of home lighting systems installed in county this year	237
Total number of such systems in county now	1,428
Number of home grounds improved	261
Number of farm and home sanitary conditions improved	63
Number of homes screened against flies and mosquitoes	71
Number of sewerage disposal systems installed	12
Number of telephones installed	541
Number of farmers furnished plans and induced to adopt systematic crop rotations	745
Total acreage of such rotations	9,059
Number of new pastures established	93
Number of old pastures renovated	45
Total acreage of new pastures established	1,350
Total acreage of old pastures renovated	577
Number of drainage systems established in county	56

Number of acres drained by tile	517
Number of acres drained by ditch	5,695
Number of farmers induced to remove stumps	14
Number of acres from which stumps were removed	88
Number of home gardens planted or improved	301
Number of road improving demonstrations assisted in	11
Number of miles of improved roads resulting therefrom	39
Number of farmers who planted cover crops to be turned under	855
Number of new implements and tools bought	311

Organizations:

Twenty-one of the twenty-three counties organized into county associations, federations or farm bureaus. Number local farmers' organizations, 373; total membership, 22,297.

Co-Operative Buying And Selling By Farmers.

Reports from county agents show that during the past month farmers in the various counties through their local or county organizations purchased farm supplies to the amount of $570,368.33 and sold farm products to the amount of $3,961,503.09. The estimated saving to the farmers on these transactions was $748,094.54, or about 19%. The principal commodities purchased were fertilizers, lime, seeds, binder twine, coal, machinery, etc. The principal farm products sold were dairy products, tobacco, truck crops, canning crops, small fruits and wool.

Negro Work.

The negro work has been continued as heretofore with two negro agents, each centered in a region of the State where they can serve the largest number of farmers. There is, no doubt, opportunity for much greater service to the negro farmers. A survey of the situation in the State made by a specialist from the United States Department of Agriculture during the past year, at our request, reveals a need for much greater development of this phase of our work if funds permitted. It is hoped that we will be in position to meet this need in the near future. L. H. Martin, agent in the southern Eastern Shore, submits a splendid report showing the accomplishments of demonstration work with negro farmers. The agents report having conducted 582 demonstrations in farm crops and live stock. They have visited 2216 colored farmers and traveled 14,440 miles. Several fine community exhibits have been held, which have served to increase the interest of the farmers in their communities. Good progress has been made in colored boys' club work as cited under the club project.

Home Demonstration Work.

Miss V. M. Kellar, in charge of the home demonstration project, reports that the accomplishments of the women workers the past year have been greater than ever before for the following reasons:

1. The work is no longer in its pioneer stage. It has slowly developed by degrees to the place of such usefulness and importance that

the people as a whole recognize its value not only to the home, but to the community, the county and the State. The people have come to realize that a home demonstration agent is a necessity and not a luxury.

2. Stronger rural women's clubs are being organized in every county.

3. Programs of work, with a goal in mind, are carried out in each women's club.

4. County federations of rural women's clubs, as are now being organized, help to strengthen the individual clubs.

5. Counties are making larger appropriations for the support of the work.

6. New interest is taken in all community activities.

7. The requests coming to headquarters for help have been definite. The people have asked for information for a purpose.

8. Girls' club work has been popularized through the public demonstrations given by club teams.

9. Junior camps and short courses and the annual club week at the University of Maryland have placed club work in this State on a very high plane.

10. Local leadership in both women's and girls' work is helping us to reach a greater number of people and in time will help to make the work more specialized than it is.

No changes in the plan of organization have taken place during the past year. The staff of workers included seventeen county home demonstration agents, one colored worker, two district agents and specialists, one girls' club agent and the State home demonstration agent.

The seventeen counties having demonstration agents are helping to finance the work by county appropriations. With the exception of three counties the home demonstration agent has her office with the county agent, one clerk doing the work for both agents. All offices, with the exception of one, are located at the county seat.

All agents are required to submit programs of work which are formed after consultation with the farm women of the county. The programs for community clubs include discussions and demonstrations in home and farm conveniences, marketing and community betterment by means of

a. Good roads.
b. Better schools.
c. Better churches.
d. Recreation for both old and young.
e. Amusements.
f. Sanitation.
g. Health programs.

h. Community fairs.
i. Promoting club work for boys and girls.
j. The development of leadership.

Women's Home Demonstration Clubs.

There are 110 rural women's clubs, having an enrollment of 3,504, working with the county agents. Through these clubs the agents are able to reach a large number of women in their respective counties. Most of the clubs meet twice a month, either at farm homes or at regular meeting rooms.

Seven counties, during the past eighteen months, have organized county federations of rural women's clubs. By this means the women of the county can get together to discuss county programs of work and receive reports of progress made in any undertaking.

Developing Local Leaders.

One of the essential factors in the development of the women's club program is a leader for each line of work. These leaders are selected by the club members. They are then trained by the agent and specialists, or both.

The average rural woman is diffident as to her ability and leadership, and it is only by careful supervision and well planned subject matter that the local leaders in clothing and other projects, have been able to take to other groups of women the information obtained at a training school for local leaders which has been conducted during the past year.

Three-fourths of the clubs have not only reached their goal, but gone beyond it. The local leadership is helping the women to take the initiative and assume some of the responsibilities which the home demonstration agents have heretofore carried.

Miss Kellar reports that the women's work is going forward with definite plans and definite results are being obtained. All community organizations are the stronger for women's club work. It adds to, rather than detracts from, the strength of the local community clubs.

Clothing, Millinery, House Furnishing.

The clothing program for the past year included the making of dress forms, pattern alteration, clothing construction, children's clothing, millinery and costume planning. The 1922 reports show that 596 forms were made the past year, practically all of them satisfactory and being used. Total saving by the making of dress forms was $3,010.25. Six counties have been organized for local leadership work in pattern alteration. Fifty-six local leaders and their assistants have been trained for this work in the last four months. Demonstrations have been given in children's clothing. The specialist, Miss Knight, in charge of this phase of the work,

reports that hat making is no longer a problem the rural woman is afraid to undertake. Ninety-seven millinery demonstrations have been given the past year. Seven hundred and thirty-nine hats were made at an estimated saving of $2,196. Thirty-three house furnishing demonstrations have been given during the year.

Household Management.

Mrs. M. C. Bell, specialist in this work, reports that women are becoming more and more interested in the efficiency of home making and it is essential that thought be given to every phase of household management. A comprehensive program has been carried out as follows:

A. Efficient Kitchen.
   1. Height of Working Surfaces.
   2. Arrangement of Equipment.
   3. Labor and Time Savers.
   4. Closets, Cabinets and Shelves.
   5. Ventilation and Lighting.
   6. Selection and Care of Kitchen Equipment.

B. Floors—Their Renewing and Care.
C. Cleaning and Renovating Furniture.
D. Cleaning and Care of Rooms.
E. Home-Making as a Business.
   1. Planning the Day's Work.
   2. Planning the Week's Work.

F. Water Systems in the Home.
G. Heating Systems in the Home.
H. Lighting Systems in the Home.

Seventy-one demonstrations in this work have been conducted. Thirty local leaders have been trained. The women seem to be very much interested in this phase of extension work.

Community Activities.

There are certain programs of work of general interest that bring the people of a community together. We often find the programs to be seasonal. There are the community picnics, field days, school rallies and community exhibits. The members of the extension service take an active part in all of these activities.

Helps to standardize the community exhibit were given throughout the year by the home demonstration agents and county agents by talks on

a. The necessity for more careful selection of exhibits.
b. What is a standard exhibit?
c. What is a standard product?
d. What is meant by a standard container?
e. The value of the score card and its practical use.
f. Better premium lists and methods of entering exhibits.

The community booths at the State and County Fairs are valuable features and tend to encourage co-operation and standardization of exhibits.

Girls' Club Work.

Miss Adice Jones, girls' club agent, reports growing interest throughout the State in girls' club work.

The plan of work has been:

1. To carry on club work as a means of preparing the girls for better home-makers and citizens by developing the 4-H program and by training leaders and team workers.
2. To emphasize the public demonstration as the chief means of training and interesting the girls in club work.
3. To affiliate girls' and women's work, thus soliciting the support of the women.
4. To develop local leadership work.
5. To emphasize the recreational side of club work as an incentive, at the same time giving the girls higher ideals of what may constitute social activities. The county camps and club week are planned for as the chief means toward this end.

The club work is conducted by the home demonstration agents in each county. An outline of each demonstration in clothing, canning, bread-making, breakfast preparation, is furnished all agents. An exhibit of models to be used in girls' clothing clubs was made and sent to all agents.

Special emphasis has been given to developing public demonstra-

BREAD MAKING CONTESTS AND DEMONSTRATIONS HAVE BEEN IMPORTANT FEATURES OF GIRLS' CLUB WORK.

tion teams. As a result, there are 72 public demonstration teams which can be called upon at any time for any public meeting.

A very successful girls' club week was held at College Park last summer. A girls' club team was sent to Atlanta to compete in the National Canning Contest. The team won fifth place.

Camps.

Club camps were held in the following counties: Allegany, Caroline, Cecil, Charles, Dorchester, Harford, Prince George's, St. Mary's, Talbot, Washington and Worcester. A great improvement over last summer's work at the camps is reported. These camps have proven to be one of the greatest incentives in club work and one of the best ways of developing leaders which will in turn develop club work in their communities.

County Home Demonstration Agents.

The following home demonstration agents have been employed during the past year:

County	*Name*	*Headquarters*
Allegany	Rhea M. Morgan	Cumberland
Anne Arundel	Mrs. G. Linthicum	Annapolis
Caroline	Emily Kellogg	Denton
Carroll	Rachel Everett	Westminster
Cecil	Elizabeth Hodgson	Elkton
Charles	Mrs. Elva Bohannan	La Plata
Dorchester	Elizabeth Van Scoter	Cambridge
Frederick	Elizabeth Thompson	Frederick
Harford	Anne Holbrook	Bel Air
Kent	Susan V. Hill	Chestertown
Montgomery	Blanche A. Corwin	Rockville
Prince George's	Ellen L. Davis	Hyattsville
St. Mary's	Ethel Joy	Leonardtown
Talbot	Mrs. Olive K. Walls	Easton
Wicomico	Florence Mason	Salisbury
Worcester	Lucy Walter	Snow Hill
Washington	Susan Garberson	Hagerstown

Local Agent.

Charles and St. Mary's	Leah Woodson (colored)	La Plata

Miss Kellar and her assistants report the following summaries of their work during the past year:

Summary of State Home Demonstration Agents' Activities.

Number of counties organized	17
Number of county agents employed	17
Number of colored workers employed	1
Number of urban workers employed	1
Number of county agents employed full time	17
Number of miles traveled by State Agent	7,141
Number of meetings attended by State Agent	76

Approximate attendance	6,710
Number official letters dictated	2,173
Number talks given by State Agent	120
Number of visits to county and urban agents	55

Activities of State Workers.

Number miles traveled by State workers	31,298
Number meetings attended by State Workers	407
Approximate attendance	28,082
Number official letters dictated by State workers	3,134
Number visits to county and urban agents	212
Number talks given by State Workers	410
Number demonstrations given by State workers	170

Summary of Organizations and Club Activities.

Number of women's clubs (total enrollment, 3,504)	110
Number of girls' clubs (total enrollment, 2,710)	206
Number of community clubs (total enrollment, 3,839)	73
Number of county federations of rural women's clubs	7
Number of county federations of girls' clubs	4
Total number of federations of women's clubs and girls' clubs	11
Number of short courses held for women	14
Number of farmers' institutes held last year	11
Number of community shows held past year	40
Number of exhibits	12,270
Number of short cuts in sewing given	75
Number of millinery demonstrations given	97
Number of hats made	739
Value of saving from millinery demonstrations	$2,196
Number of clothing demonstrations given	471
Value of saving from clothing demonstrations given	$20,780
Number of dress forms made	596
Value of dress forms made	$3,010.25
Number of demonstrations in house furnishings	77
Number of visits from specialists	109
Number of days specialists spent in counties	234
Number of food demonstrations given	312
Number of modern conveniences or labor saving devices installed due to agents' influence	619
Number of Local Leaders:	
(a) Household Management	17
(b) Clothing	44
(c) Food	28
(d) Girls' work	40

Summary of Girls' Work.

Number of girls enrolled in poultry work	988
Number of girls completing poultry work	401
Percentage completing poultry work	40.5
Number of girls enrolled in garden work	360
Number of girls completing garden work	179
Percentage completing garden work	43.8
Number girls raising 1/10 a. gardens	95
Number girls raising 1/20 a. gardens	135
Number girls raising smaller gardens	97
Number completed garden records	205
Number girls completing a year's sewing work	1,179
Number girls' clubs	206

Total number girls enrolled in clubs	2,710
Percentage of girls enrolled making 100 points	21.3
Number jars of products canned by girls	31,355
Number steam pressure canners and other labor saving devices installed through girls' efforts	50
Number club rooms established	6
Number equipments in schools	43
Number girls completing first year work	743
Number girls completing second year work	249
Number girls completing third year work	97
Number girls completing fourth year work	46
Number certificates to be awarded	669
Amount of money contributed by individuals, banks, organizations, etc., to girls' work	$962.71
Number girls reading books suggested by and obtained from the Extension Service	329
Number picnics given by girls	33
Number plays given by girls	23
Number camps given by girls	16
Number entertainments given by girls	66
Amount of money raised by girls	$1,602.80
Amount of money made in counties by poultry club girls	$4,048.81
Amount of money made in counties by garden club girls	$ 741.20
Number short courses conducted by girls	65
Number carrying on club work by short course method	9
Number visits made to club girls' homes	1,580
Number girls keeping expense accounts	238
Number public breakfast demonstrations conducted	42
Number public canning demonstrations conducted	20
Number public clothing renovation demonstrations conducted	21
Number public bread demonstrations conducted	39
Number other teams trained	13
Total number teams trained	72
Number of clubs making exhibits at county fairs	89
Number of girls exhibiting canned products	308
Number of girls exhibiting sewing, poultry and garden products	466
Number county organizations of girls	6
Number of girls who attended club week	98
Number of local leaders secured to aid in club work	51

BOYS' CLUB WORK.

Mr. E. G. Jenkins, State boys' club agent, and Mr. P. W. Chichester, assistant agent, report that boys' club work has moved forward steadily this year as is indicated by the facts and figures compiled from county agents' reports. Agents have reported as "enrollment" more nearly the exact number of boys starting demonstrations. There has been an increase of 13% in completed demonstrations this year over last year and 49% over 1920. This indicates that a larger number of farm boys have been reached. An increase of 79% in valuation of products raised, and an increase of 71% in returns, is evidence of a most commendable forward step in developing worthwhile demonstrations, and indicates advancing efficiency in methods of carrying subject matter to the boys.

Demonstrations of large scope, such as numbers of high priced registered cattle and swine, larger acreage of selected seed corn and flock management demonstrations in poultry, and the success in live

stock judging have given greater dignity to club work, caused people of the State to look upon it as a more mature branch of the Extension Service and paved the way for its adoption as a part of community program of work. Thus boys' club work is more effectively strengthening the Extension Service program.

Scores of boys after but three or four years in the clubs now have really valuable holdings of live stock. This is a result of several activities developed for the purpose of holding boys in the clubs until they are ready to take up adult demonstration work. Some of the animals owned by boys are of such quality that they have been able to win ribbons in open contest at fairs in this and other States, and some of these prize winning animals have been raised by boys who have had the parent stock in previous club demonstration work.

Exhibits of dairy cattle and swine especially at Timonium Fair and Harford County Fair, have been of exceptionally high order. Fifty-one registered heifer calves at the former and 44 registered heifer calves at the latter caused much favorable comment.

It is interesting to note that some of these boys whose animals placed first in their breeds last year, were so well cared for that they held their places again this year, indicating the consistency with which boys are carrying out the best practices advised by the University of Maryland.

It is impossible to estimate the spread of influence of these demonstrations. Ninety per cent of the herds of dairy cattle in Harford county have been tuberculin tested. The county agent declared that this success is almost entirely a result of club work. The improvement in herd sires in communities where calf club work has been most active and the improving methods on other farms than those directly affected by calf club work, are results which we are not able to measure, but which have been sufficient to cause much comment.

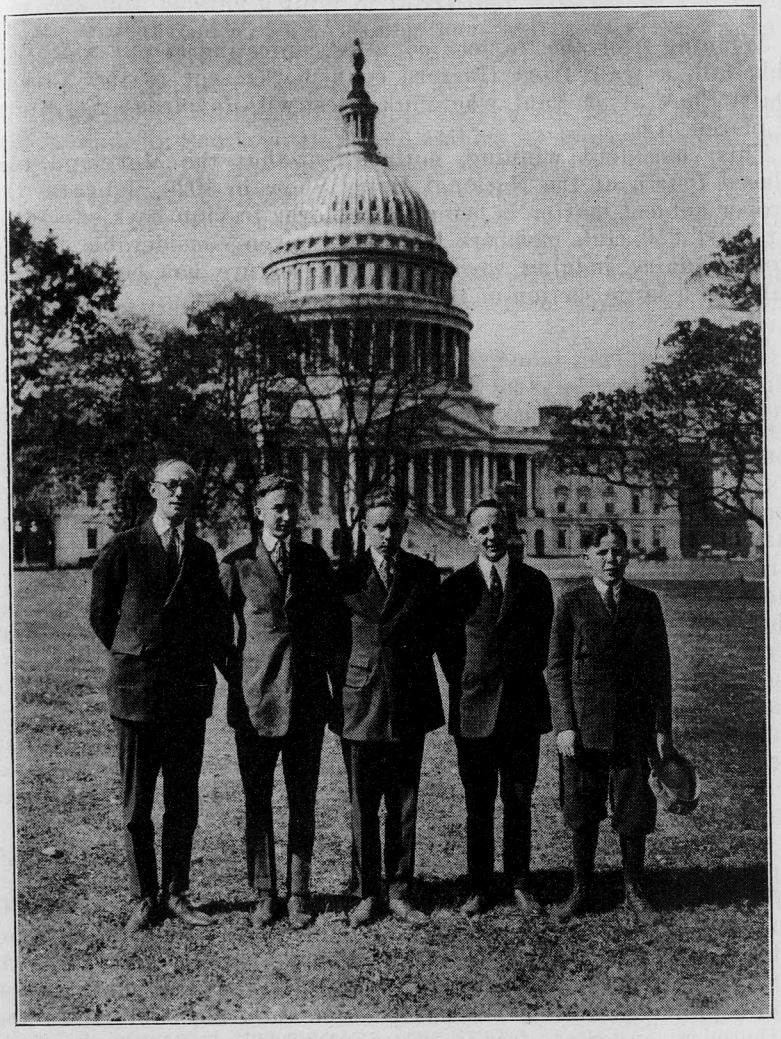
Crop demonstrations have met with disastrous results in many cases, due to drought. Yields have been lower than usual. On an average there has been a growing interest in tomato demonstration work, probably due to a desire on the part of certain communities to hold the market which was once so largely controlled by Maryland.

Poultry demonstration work has received considerable attention and a number of flock management clubs have been started. It is confidently expected that these clubs which will keep consistent records from November 1st of this year until November 1st, 1923, will have some very excellent reports to make next year.

The growing interest in poultry work is indicated by the fact that there were 286 boy club members completing demonstrations this year as against 48 last year and that the valuation of poultry has increased considerably over 300% per cent above last year. As boys are now being reported to be taking over all the swine on the home farm as their particular responsibility, so our boys are now beginning to take over the home poultry flock.

Win International Contest.

The most outstanding accomplishment in Maryland club work in 1922 is the success of the live stock judging team composed of Warren Rice, George Worrilow and Joseph Glacken, of Cecil county, who, by winning first place at the Southeastern Exposition at Atlanta, Ga., in the fall of 1921, were given a trip to Europe and there in contest with the young farmers' clubs of England, won the first year's contest for the gold cup offered as a permanent prize



THE CECIL COUNTY BOYS WHO WON THE TRIP TO EUROPE AND THE GOLD CHALLENGE CUP OFFERED BY THE LONDON DAILY MAIL IN A LIVESTOCK JUDGING CONTEST IN ENGLAND, JULY, 1922.

to that country which will win it three times in succession. These boys who were thoroughly well acquainted with American types, had an opportunity to visit herds in England, especially at the Royal Stock Show, and there gained intimate knowledge of British types. Their most important accomplishment probably was in placing first over the English team in judging the Milking Shorthorns, a breed to which they had been able to give little attention until they reached England.

First at National Dairy Show.

Winning from the thirteen counties contesting at our State Fair this fall, a team from Harford county was sent to the National Dairy Show at St. Paul, where in contest with fourteen other States, it placed first.

This consistent winning, noting also that the Maryland team placed fourth at the National Dairy Show in 1920, indicates that proper subject matter is being gotten over to club boys effectively. At least 250 club members have been given considerable instruction in dairy judging work, and this feature has been of great value to a large section of the State.

Camp Vail.

Maryland's participation in the activities at Camp Vail, Eastern States Exposition at Springfield, Mass., in September was of considerable importance. Through the generosity of the State Bankers' Association, a team of three boys and one of three girls were enabled to take their places in the activities of that outstanding camp. The State girls' club agent and State boys' club agent directed the entire club demonstration work at the exposition, and the assistant State boys' club agent was adjutant at the camp. The county agent and home demonstration agent from Maryland performed important duties there. These members of the boys' and girls' club organizations brought back inspiration and information which is of growing value. A considerable increase in the number of club members who attended the short course this year indicates its popularity. Probably no single activity in the State is doing so much to interest boys and girls, from an inspirational standpoint.

Timonium Fair.

The quality of exhibits at Timonium Fair this year was favorable. But two pigs in each class and not more than four from any one county were allowed. The county agents, therefore, saw that the very best animals were selected. The dairy calves and heifers would probably average higher in value than any similar number gathered at any State fair in the country. About $4,000 was budgeted by the fair association for boys' club affairs, including prizes in the two exhibits mentioned above, poultry and live stock judging.

The B. & O. R. R. Award.

The Baltimore and Ohio Railroad awarded $100 to the most outstanding club boy in that territory touched by its lines. This prize was won by Norwood Thornton, of Cecil county, who elected to use his award for a trip to the International Live Stock Exposition at Chicago, where he enjoyed the activities provided for the hundreds of club members who visited that show.

Twenty-three active club members entered the University of Maryland this fall, making a total of thirty-four boys at the University at the present time. These young men and young women have organized a University Four H. Club, which promises to be of great service in the development of the club program.

Satisfactory advancement is observed among the colored farmmakers' clubs in Southern Maryland and on the Eastern Shore. One pig club reports 102 fine Hampshires farrowed, all of which are subject to register. It is reported that every colored farmer in that community this year used pure-bred stock for breeding and pork production, as a direct result of this pig club work. In several communities colored farmers have learned the value of testing corn and have applied this knowledge gained from farm makers' clubs with remarkable results.

Demonstration work in culling, feeding and caring for poultry has gone forward in several of the farm makers' clubs and results are expected comparable to those being observed in the swine demonstration work.

Statistics For Boys' Club Work, 1922.

Grand Totals.

Club members enrolled	1806	
Club members reporting	1122	
Value of completed demonstrations		$75,696.61

Totals—White Boys.

Club members enrolled	1467	
Club members reporting	938	
Value of completed demonstrations		$63,657.50

Totals—Negro Boys.

Club members enrolled	339	
Club members reporting	184	
Value of completed demonstrations		$12,039.11

Percentages and Averages

Percentage of demonstrators completing	62	
Percentage of white demonstrators completing	64	
Percentage of colored demonstrators completing	54	
Average value of completed demonstrations		$67.47
Average value of completed demonstrations (white boys)		67.87
Average value of completed demonstrations (negro boys)		65.43

Average yield of corn per acre (bu.)	65.56
Average yield of potatoes per acre (bu)	147.73

Statistics of State and Assistant State Agents' Activities.

Number of miles traveled	16,851
Number of meetings attended	160
Approximate attendance	7,552
Number visits to county agents	115
Number demonstrations visited	334
Number official letters	1,368

(Above figures do not include State Agent's trip to Europe.)

AGRONOMY.

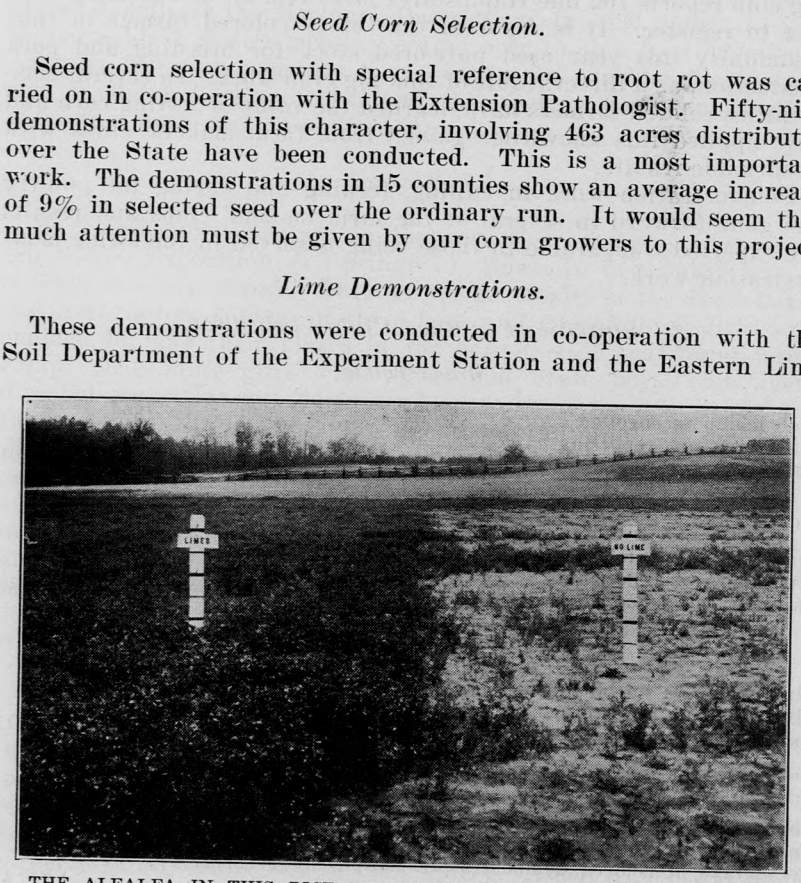
Mr. F. W. Oldenburg, specialist in this work, reports the following program as having been pursued in co-operation with the agents during the past year.

Seed Corn Selection.

Seed corn selection with special reference to root rot was carried on in co-operation with the Extension Pathologist. Fifty-nine demonstrations of this character, involving 463 acres distributed over the State have been conducted. This is a most important work. The demonstrations in 15 counties show an average increase of 9% in selected seed over the ordinary run. It would seem that much attention must be given by our corn growers to this project.

Lime Demonstrations.

These demonstrations were conducted in co-operation with the Soil Department of the Experiment Station and the Eastern Lime



THE ALFALFA IN THIS PICTURE SHOWS HOW SOUTHERN MARYLAND SOILS WILL RESPOND TO LIME. EXCEPT THAT LIME WAS USED ON THE LEFT, THERE WAS NO OTHER DIFFERENCE IN TREATMENT OF THE TWO PLOTS.

Bureau. Definite card records of the yields of all crops included in the rotation under different treatments were kept for reference. These are the most practical lime demonstrations that we have been able to carry on.

Garlic Eradication.

A special effort has been made by the specialist and agents to bring to the attention of farmers the importance of garlic eradication. Garlic is undoubtedly the worst weed in Maryland. It not only decreases the yield of wheat and lowers the market value, bringing about great losses to farmers but it also causes a disagreeable flavor and odor in milk and causes losses to the dairymen. An elaborate campaign was started during 1922 with a view to getting farmers to use selected wheat and to follow the other necessary means for controlling garlic. It is a hard problem on account of common cultural methods and general practices of farmers. However, a good start has been made. A total of 880 farmers have been consulted relative to garlic by the agents; 90 demonstrations were in progress and 45,000 bushels of wheat were cleaned of garlic by farmers. A bulletin machine, together with charts, etc., have been shown at several county fairs, drawing attention to garlic eradication.

Selecting Better Seed Corn.

Farmers all over the State have been urged to take greater pains in selecting their seed corn, giving due regard to type, health, vigor and freedom from disease. Many demonstrations were conducted by the specialist and agents, and field meetings were held when the corn was husked and lying in heaps in the field. Many yields in the demonstrations and various county contests exceeded 100 bushels per acre. The winner of a five-acre contest in Harford county had a yield of 110.5 bushels per acre of dry shelled corn.

Pure Bred Corn.

The amount of pure bred corn in the State is increasing very rapidly. Most of this corn has been exhibited at various State and county fairs and the best was shown at the International Grain and Hay Show. In 1921 Maryland growers won 17 corn prizes and this year were able to win 22 prizes, including the champion first prize in our district for the best ten ears of Reid's Yellow Dent.

It was through the efforts of the specialist that Reid's Yellow Dent is being grown so generally in the State. More than 100 growers sent exhibits to Chicago this fall. Winning prizes at the International Grain and Hay Show is a great asset to the seed corn growers, for it makes a wide market for this selected pure-bred corn. Special emphasis is being placed on Reid's Yellow Dent and Johnson County White. These are desirable varieties for the richer soils of the State.

Miscellaneous.

Demonstrations have been conducted in the sterilization of tobacco seed beds. Investigations have shown that this is a desirable practice for the elimination of weeds and the production of strong, healthy plants. This work was carried on in two counties. Unfavorable weather prevented work in other tobacco growing counties.

Continued progress is being made in the growing of more legumes for cover crops for soil building for hay and for seed. Many farmers are learning to grow and to appreciate the value of soy beans. It is estimated that about 40,000 acres of this crop were grown during the past season. The growing of alfalfa is making steady progress in the State and many demonstrations are in progress in nearly all of the counties.

The specialist reports that Japan clover is destined to occupy an important place in the agriculture of the State, especially in Southern Maryland and on the Eastern Shore. This plant grows, or is at its greatest growth, during July and August, when other pasture crops are generally at their poorest.

In co-operation with the Experiment Station and Crop Improvement Association, nineteen farmers had their seed wheat certified. A supply of a new strain of Mammoth Red Wheat was sent to all of the county agents by the Station. Developing certified seed will mean much to grain growers of the State.

Mr. Oldenburg reports that during the past year 84 meetings were attended, with a total attendance of 6,520 and at these meetings 72 addresses were delivered. About 800 farmers conferred with the specialist during the year at these community shows and fairs and at other places, and about 500 were reached by letter.

The county agents were visited on 149 different occasions. Two hundred and sixty-five demonstrations were visited and 69 other farms. Fourteen field meetings were held and the products were judged at 27 fairs and community shows.

In doing this work the specialist traveled 9,475 miles by railroad, and 6,447 miles by auto and other means, making a total of 15,922 miles.

ANIMAL HUSBANDRY.

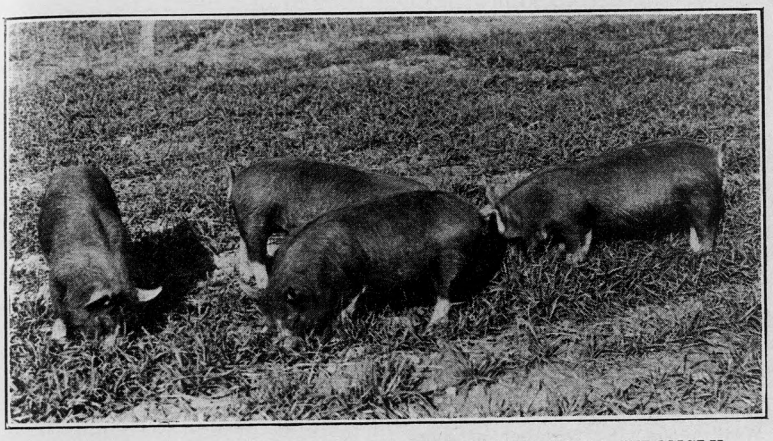
Mr. B. E. Carmichael, in charge of this project, reports progress in the development of better live stock in the State. Demonstrations have been successfully conducted in the use of green forage for hogs, although adverse weather conditions, cost of fencing, etc., have prevented many growers from taking up the project.

The chief problems attacked are those which have to do with the use of better stock and better methods in the production of animals and animal products. This work has been carried on by advising with agents and farmers, addressing meetings, judging at community shows and county fairs and in promoting animal husbandry work with boys' clubs.

The specialist has promoted Extension Work in horses, beef cattle, sheep and swine. He assisted in interesting a group of farmers to purchase 45 carloads of stock feeders direct from the West, and co-operated in several feeding demonstrations.

A bulletin entitled, "The Brood Sow and Her Litter," was prepared by the specialist. He has assisted in promoting the State Sheep Growers' Association and in preparing an educational exhibit for Farmers' Day.

Mr. Carmichael reports having traveled 10,344 miles in the State, dictated 752 letters and prepared numerous articles for publication.



TEMPORARY PASTURE CROPS FOR HOGS HAVE BEEN STRONGLY ADVOCATED BY THE EXTENSION SERVICE.

Hog Cholera.

Dr. I. K. Atherton, in charge of hog cholera control work in the State, reports records of 602 outbreaks of hog cholera from all sources, a slight increase over 1921. Much valuable information regarding the introduction, harboring and spread of the infection has been gained during the year. All data obtained confirms deductions made in former years as to the two outstanding sources of infection of primary outbreaks. The specialist reports that the first of these is the feeding of garbage, table scraps or kitchen swill containing bones, rinds or scraps of pork. Where data has been secured regarding source of infection it is found that this factor is responsible for approximately 85% of the outbreaks. The second source of infection is the purchase of new stock without due care regarding the source from which it was obtained.

The principal reasons for the spread of the disease of secondary infections are: first, the failure to report promptly the existence of the disease, and, second, the failure to dispose promptly and properly of the carcasses of swine that have died from the disease.

The county agents have co-operated heartily with the inspectors

in the various regions of the State and in notifying headquarters of outbreaks of the disease.

Dr. Atherton reports the following summary of work conducted by the Government and State Inspectors in co-operation with the field men.

Government and State Inspectors, in co-operation with the field men.

Number B. A. I. veterinarians engaged		4
Number of State veterinarians engaged		0
Meetings attended		93
Meetings addressed		66
Total attendance		6,407
Interviews with farmers	5,958	
Interviews with verterinarians	548	
Interviews with others	3,759	
Total		10,265
Farms visited on call		738
Voluntary visits for observation and advice		2,068
Autopsies		182
Premises carded		283
Premises cleaned and disinfected		1
Outbreaks of hog cholera reported from all sources (number of premises)		602
Demonstrations of treatment		37
Number of hogs treated in demonstrations		376
Attendance at demonstrations		305
Assisted Practitioners in Treating Herds:		
Well herds, 18; Number of hogs		313
Sick herds, 1; Number of hogs		28
Laymen Trained to Administer the Treatment:		
Serum alone		124
Virus and serum		0
Miles traveled		59,318
Diagnosis:		
Cholera		536
Hem. Sep.		0
Necro		4
Pneumonia		19
Tuberculosis		1
Other diseases and conditions		248

Horticulture.

Mr. S. B. Shaw, specialist in horticulture, reports that the outstanding problem confronting the average Maryland fruit and truck farmer is so to improve the quality and method of handling his commodity as to insure for him the maximum market price for his product. The primary object and the most important phase of the horticultural program for 1922 has been to encourage first, improvement in quality; and second, more careful grading and packing.

The work under this project has been so organized as to correlate

the efforts of the specialists in entomology, plant pathology and marketing, working in co-operation with the county agents. The Specialist reports the work as follows:

The Classified Orchard Project Demonstrations

The Classified Orchard Project Demonstrations included ten orchard management demonstrations put on co-operatively with other Specialists and forty-two conducted by the specialist and agents. These 52 orchard demonstrations were conducted in sixteen counties. Good results have been secured where the directions of the specialists and agents were carried out.

Seventy advisory orchard demonstrations are reported by the specialist. In many cases it is impossible to have growers carry out the entire program included in a regular demonstration. However, many growers are glad to have advice on all their orchard operations but will not keep records. This work was also conducted in 16 counties of the State.

Field Meetings.

Upon request of county agents, orchard field meetings were conducted in pruning, mixing and application of spray material, and in the selection, grading and packing of fruit and vegetables. Sixty-seven pruning demonstrations were conducted in 15 counties; nine demonstrations in mixing and application of spray material were held in five counties and twelve demonstrations in the selection, grading and packing of fruits and vegetables were conducted in eight counties. A total of 88 field meetings were held with an attendance of 952 persons.

Organization of Fruit Growers.

The specialist, in serving as secretary of the State Horticultural Society, has rendered unusual service to the fruit growers of the State. Aside from keeping in direct touch with all the leading fruit growers, a monthly news letter has been issued giving timely information. This relationship between the Society and Extension Service has enabled both organizations to render greater service.

Special effort has been made by the specialist to encourage co-operative marketing of fruit. In co-operation with the marketing specialist, the leading fruit growers of Washington and adjoining counties were called together for the purpose of forming a co-operative marketing organization through which they might be able to grade, pack and distribute their fruit to better advantage. Subsequent work developed that the growers in four counties were ready to start seven local packing house units. A severe freeze at blossoming time prevented the development of these plans; and only one unit was established; namely, at Hancock.

There is a great opportunity for the better business organization of our fruit growers for the purpose of grading and marketing their product.

Miscellaneous Activities.

The specialist, in co-operation with Mr. Beattie of the United States Department of Agriculture and county agents, has continued the work with cantaloupes on the Eastern Shore. The problem is to induce the growers to do careful grading and packing as well as picking at the right time. Unfavorable weather prevented much progress this year. Special work in grading of peaches has been conducted in several orchards during the past summer with a view to having our growers grade according to the United States standards. Similar work has been done in the grading of apples. Demonstrations in the grading and selection of potatoes were conducted at several county and community fairs.

The last census indicates that Maryland has 2,649,022 bearing apple and peach trees. The orchards reached by the work as outlined in this project contained approximately 521,250 apple and peach trees. Roughly estimated, this means that 19 per cent. of the bearing trees have been directly affected through the work of the specialist and agents. The estimated production of apples and peaches in Maryland for this year is 259,792,000 bushels; 19 per cent. of this production, or 49,360,480 bushels, has been affected by the work under this project:

The Specialist submits the following summary:

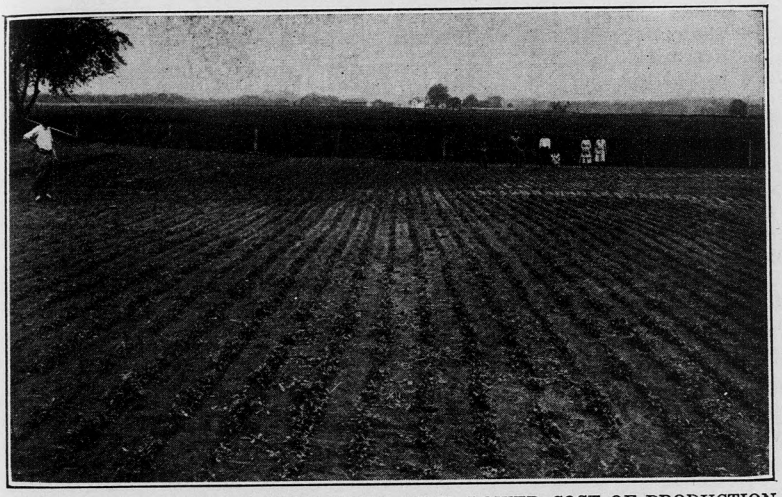
Number classified orchard project demonstrations in 16 counties..	52
Number advisory orchard demonstrations in 16 counties.....	70
Total number orchard demonstrations in 19 counties.....	122
Total number trees affected by orchard demonstrations.....	521,250
Total number bushels 1922 crop affected by orchard demonstrations	49,360,480
Number orchard field meeting demonstrations in 17 counties.....	88
Attendance	952
Number community shows, 17; Fairs, 5; in 11 counties; Total....	22
Number meetings attended, 12 counties; attendance, 2,110.....	35
Number visits made to demonstrations, 204; Others, 75; Total....	279
Number persons advised on horticultural subjects.....	383
Miles traveled—Railroad, 8,910; Auto, boat, etc., 7,091; Total.....	16,001
Letters Written:	
Mimeographed	12,447
Dictated	3,229

VEGETABLE AND LANDSCAPE GARDENING.

Mr. W. R. Ballard, in charge of this project, reports good progress in Extension Work in truck crops and landscape gardening. Especial interest is being manifested in the latter. In fact, it has been impossible for the specialist to meet the demands for this work.

Truck Crops.

The specialist reports that special effort has been made to develop the truck crop industry in Southern Maryland. The climatic conditions in certain sections of Southern Maryland are such that truck crops can be matured from ten days to two weeks earlier than in those sections immediately surrounding the city of Washington. This project will be pushed in 1923.



BETTER PLANTS, GREATER YIELDS PER ACRE, LOWER COST OF PRODUCTION.—THESE ARE THE SUCCESSIVE STEPS IN SUCCESSFUL TOMATO CULTURE. DEMONSTRATIONS IN 1922 PROVED THAT IT CAN BE DONE.

The most outstanding demonstration conducted by the Service in any department was with tomatoes in Cecil County by the specialist and county agent, A. D. Radebaugh. For some years we have been trying to induce our tomato growers to select seed and transplant into the field two weeks earlier, as this practice at the Experiment Station had given largely increased yields. While this whole problem had been brought to the attention of the tomato growers generally, it remained for county agent Radebaugh to develop a concrete plan for its accomplishment. Mr. Radebaugh suggested putting on a "demonstration tomato seed bed" upon a large scale. Sixty growers agreed to use the plants from this demonstration bed. The specialist and agent arranged for the use of certified seed and superintended the planting and growing of the plants. One million fifty thousand plants were pulled from this bed and distributed to growers in the county at a cost of forty cents per thousand. These plants were ready to go into the field two weeks before the usual time of setting.

The number of field demonstrations in which plants from the "demonstration bed" were used was sixty, and the total acreage in demonstration plots two hundred and fifty-five.

There is a great opportunity for the better business organization of our fruit growers for the purpose of grading and marketing their product.

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The number of field demonstrations in which plants from the "demonstration bed" were used was sixty, and the total acreage in demonstration plots two hundred and fifty-five.

The following table shows the yield, cost of production and net profit per acre on 21 demonstrations, these being representative of the 60 demonstrations conducted.

Demonstrator	No. Acres	Total Yield Tons	Gross Proceeds	Cost of Production	Net Profit	Net Profit Per Acre
Dr. C. C. Laws.....	1½	18	$216.00	$79.40	$136.60	$91.06
J. F. Budd.....	5	35	420.00	208.40	211.60	42.32
H. D. Watson.....	3	18	216.00	121.00	95.00	31.66
F. B. Howard.....	4	31	382.00	207.37	164.62	41.16
Ward L. Baker.....	5	23.6	283.20	154.70	138.50	25.70
Walter Gibbs.....	4½	20	240.00	140.00	100.00	22.22
John H. Harris.....	2½	20.6	247.20	150.36	95.84	38.74
J. Harvey Townsend.	3	39	468.00	175.00	293.00	97.66
F. W. Gunns.....	5	24.2	290.00	228.47	61.53	12.31
Wallace Williams.....	5	25	300.00	221.00	79.00	15.80
William Davis.....	2½	11.7	140.40	108.50	31.90	12.76
Tullard Buckworth...	4	37.2	448.20	169.40	276.80	69.20
John Lostyn.....	1	4.3	52.00	47.15	4.85	4.85
J. J. Schneider.....	3	15.7	187.80	150.00	37.80	12.60
Leonard Blanchfield..	4	23.3	279.80	103.80	103.80	25.95
James H. Shelton.....	2	3.8	45.20	40.00	5.20	2.60
C. J. Leverage.....	5	39.2	470.00	159.80	310.20	62.04
R. H. Whiteoak.....	2	7.66	92.00	86.80	5.20	2.60
William R. Cameron..	9	99	1,188.00	670.00	518.00	57.55
Walter M. Cameron...	1½	33	396.00	223.02	172.98	115.32
Irvin Schrader.....	3½	37.5	447.00	208.14	238.86	68.25

THE FOLIAGE AND STURDY CHARACTER OF THE TOMATO PLANTS IN THIS FIELD AUGUST 4, 1922, ARE GUARANTEES THAT THE YIELD WILL BE ABOVE THE AVERAGE. THE ACTUAL PRODUCTION WAS 312 BUSHELS PER ACRE.

The average yield per acre on the demonstration plots was 290 bushels, while the estimated average yield for the State was only 100 bushels and for Cecil County 125 bushels. The increased yield per acre of demonstrations over the average for the county amounted to 165 bushels. This clearly demonstrates that increased yields can be secured at a profit when proper methods for handling this crop are adopted. Great credit is due Mr. Radebaugh for carrying out this most unusual and successful demonstration.

Landscape Gardening.

There is a rapidly awakening interest in all subjects pertaining to landscape gardening. The demand for information and assistance has ranged from requests for cultural data, directions for controlling insects and diseases, methods of establishing and maintaining lawns, advice as to choice of and simple arrangements of plant material, to more or less elaborate designs for demonstration planting of suburban and farm home grounds, school grounds and the grounds of other public institutions, flower gardens, farm gateways and memorial plantings. The methods employed in carrying on this work may be described as follows:

Leaflets, mimeographed sheets and bulletins have been distributed quite extensively. The first issue of the bulletin, "Garden Flowers," was soon exhausted and has just been revised and enlarged, the specialist co-operating with Prof. A. S. Thurston in this undertaking. It will be ready for distribution shortly. Circular No. 51, "Garden Culture of Sweet Peas," was issued and distributed to interested parties.

Timely articles on various phases of landscape gardening have been contributed to the press, particularly to the "Maryland Farmer."

Requests for information by letter have increased quite markedly during the past year. Considerable assistance has been given to home owners through personal visits. Often at the close of afternoon lectures several places are visited and owners advised as to the best solution of their problems.

Twenty-eight public lectures have been given during the year with a total attendance of over 1,200. Lantern slides and photographs have been used quite effectively in these meetings. Opportunity is given for discussion and for the asking of questions when time is available.

New demonstrations undertaken during the year consist of eleven school grounds, twelve home grounds, three memorial plantings, three public institution grounds and three of miscellaneous character. Besides these, a number of older demonstrations have required more or less attention. Demonstrations of this kind sometimes take a few years in which to complete the plantings and longer to secure the desired effect. As rapidly as possible photographs are being taken to show the progress being made.

County agents and home demonstration agents both co-operate with the specialist in these demonstrations. After making a thor-

ough study and survey of a new project for demonstration, a blue print is furnished the demonstrator and agent, together with a planting list and planting directions.

The specialist reports having written about 400 letters and traveled 5,370 miles by rail and 2,590 by auto, or a total of 7,960 miles in all.

Dairy Husbandry.

Mr. J. A. Conover, specialist in dairy husbandry, reports a growing interest in the dairy industry of the State. The work has been carried on under the following heads:

1. Pure bred Sire Campaign.
2. Creamery and Milk Plant Work.
3. Cow Testing Association Work.
4. Boys' Club Work.
5. Miscellaneous demonstrations.

Pure-Bred Sire Campaign.

Every effort has been made to push this project throughout the State. A bull club has been organized in Queen Anne's County where the agent has entered his activities in developing the dairy industry of that section. Personal assistance has been rendered by the specialist in the placing of thirty-one pure-bred bulls in the following counties: Baltimore, Frederick, Anne Arundel, Queen Anne's, Dorchester, Charles, Prince George's, Calvert, St. Mary's, Montgomery and Allegany. Several agencies have contributed to the support of this work. Many private breeders in Baltimore county, at personal sacrifice, have pledged themselves to trade a pure-bred bull calf to any man in the county for his scrub bull.

The United States Bureau of Animal Industry has placed a number of pure-bred calves on loan in different counties of the State. The specialist has made 56 farm visits in connection with this campaign and is now compiling a list of all pure-bred herd-owners of the State. This is the most important phase of the dairy extension work to be prosecuted in the future.

Cow Testing Association.

The specialist reports difficulty in promoting cow tesing association work. The primary trouble seems to be failure of testers to give satisfaction, indifference of patrons toward continuing the work, etc. It has always been a problem to secure satisfactory testers on the present basis of employment. Of the five cow-testing associations in the State, two discontinued the work at the close of the year. A careful study must be given to a reorganization of this work so as to insure its continuance upon a satisfactory basis. There is no doubt about the great benefit of cow testing work for the benefit of the industry.

Creamery and Milk Plant Work.

The specialist has given considerable time to assisting in the establishment of a creamery and milk plant at Waldorf, Charles County. This plant will be of the utmost value in encouraging the dairy industry in this section.

Aid must be given in securing pure-bred bulls, milk testing and testing for tuberculosis. Already 430 head of cattle have been tested in Charles County for tuberculosis with only eight reactors. To make the creamery an industry, generally a success in this section, better cows must be brought in, more legumes must be grown and assistance given in building barns and silos. The specialist reports that dairy work in Southern Maryland is really pioneer work and must largely be carried on through individuals rather than through organizations.

THE DAIRY INDUSTRY IS GAINING NUMEROUS PURE-BRED ANIMALS THROUGH THE BOYS' AGRICULTURAL CLUBS.

Miscellaneous.

The specialist has assisted in the boys' club work, promoting judging contests and coaching the teams. He has addressed 53 meetings with an attendance of 2,419, conducted demonstrations at eleven fairs and attended 20 conferences on dairy work in the State.

A total of 337 farm visits have been made with county agents. He has traveled a total of 12,531 miles; 7,245 by rail, 5,151 by auto and 137 by boat. The specialist has spent 173 days in the field and answered 615 letters.

Miscellaneous Dairy Extension Work.

Mr. J. A. Gamble, head of the Dairy Department of the University, serves as a part-time specialist, devoting his efforts mostly to the marketing phases of dairy products. Mr. Gamble reports that the intensive work of the Institution in promoting co-operative dairy marketing is bearing fruit. It is safe to say that our dairymen organized into market groups are beginning to understand some of the problems which underlie the successful co-operative marketing of dairy products. They are discovering that the production of milk of high quality so economically that it can be sold at a profit in competition, is a major factor in dairy success and that there are as well, transportation, distribution and surplus problems that call for real effort along sound lines if they are to be solved.

The fact that producers and dealers in our three market groups now meet at stated intervals to discuss the milk situation from its several angles is meaning a better realization on the part of the dairymen as to the importance of quality and the orderly marketing of their milk and cream. Dealers have learned first hand the problems of the producer as to cost of feed, labor, etc. With the true facts continually before the combined group of producers and distributors, helpful reactions have resulted. Knowledge of milk marketing facts has also given the leaders in the organized market groups confidence and a growing ability to cope with future problems related to the co-operative marketing of dairy products in Maryland. It is realized by all, as never before, that successful dairy organization is not a smoke screen behind which inefficiency in production and unsound practices may successfully hide.

While the organization of our dairymen on a market basis has become a reality, future results will perhaps very largely depend upon whether or not the organization is able to make its members see and do those things which will make for better quality, economic production, better handling and transportation. Certainly, our organized groups have now at their disposal a service system capable not only of serving themselves, but distributors and consumers as well.

Financial Returns From Organization.

A digest of the Bureau of Markets' monthly milk reports for the past year, giving the prices received by the producers shipping to over one hundred of our largest cities, shows an average price of 23.9 cents per gallon. During the same period, between 26 and 27 cents per gallon was received by dairymen shipping to Maryland markets. While this price should have been greater, because of investment and effort, the above figures show that in this State, prices for market milk have been better than the average. Without question, the advanced prices received were very largely the result of organization. Certainly, they show that the industry has been in a position to do business in a business-like way.

Each increase of a cent per gallon means an additional $1,100

per day to the shippers of Maryland. This, in a year, amounts to over $400,000 and a margin of 2½c per gallon, an additional million. By adding this to the average price received by dairymen in the United States (23.9 cents per gallon) it is apparent that our dairy industry has fared very well.

Milk Marketing Surveys.

During the past three months, three graduate students in dairy husbandry have been making a study of the marketing situation in the centers which consume Maryland milk, namely, Washington, Philadelphia and Baltimore. These studies include primary and secondary markets, sources of supply, outline of the contributing areas, the handling of surplus problems and the organizations in each of the markets.

In this connection, maps are being prepared giving a bird's-eye view of the railroad and trunk lines over which milk passes into these markets together with the amount contributed by the different sections. These maps should be of assistance in enabling us to make suggestions relative to more economical transportation and logical expansion of the different contributing areas into these markets.

Work with the Baltimore Group.

During the year the specialist attended 26 conferences and 18 meetings of the Maryland State Dairymen's Association with a total attendance of about 3,900 people. At these meetings, addresses were given on the economical factors of milk production, better feeding, better breeding and the importance of better quality and more economic handling of dairy products from production until delivery by the producer. The conferences have usually been with the directors of the Maryland State Dairymen's Association and related to milk legislation, milk regulations, ridding the market of undesirable milk and general seasonal supply problems. Several conferences were held with the officials of the Maryland State Board of Health and the Baltimore City Board of Health relative to the milk regulations for the Baltimore market. In this connection, a Maryland dairy farm score card has been devised.

The Maryland and Virginia Group.

During the past year, Mr. Gamble attended 18 meetings and conferences held in Washington of the directors and members of the Maryland and Virginia Milk Producers' Association, with a total attendance of approximately 600. These meetings have had to do in the main, with the reorganization of the group and the adoption of a pooling plan for that market. At the present time, approximately 87 per cent. of the milk supply coming into Washington, D. C., is covered by pooling contracts.

An interesting financial development of the association-owned plant is the fact that surplus milk going into this has brought over

a cent more per gallon than that sold in adjacent markets. During the past twelve months, this plant has handled 314,290 gallons of sweet milk, 21,290 gallons of sour milk, 32,252 gallons of sweet cream and 4,379 gallons of sour cream. It was because of this competent handing of surplus milk and cream, including that which soured en route to market, that an average price to the farmer of 27½c per gallon is shown to the shippers into this market.

Work with the Interstate Group.

Much less time was given to the Maryland members of the Interstate Milk Producers' Association with headquarters at Philadelphia during the past year. Four meetings have been held with county agents and others interested in improving dairy conditions among the 3,000 shippers on Eastern Shore Maryland who send their milk to Philadelphia. During the year several letters were received from Eastern Shore shippers who apparently are still interested in the establishment of a neutral testing service on the Eastern Shore, similar to that in successful operation during the past year in Baltimore.

Baltimore Laboratory Board Work.

The past year has seen a continuation of the neutral testing service which has been establishing the fat content of all milk coming into Baltimore for the past three years. During the past twelve months, a total of 58,900 samples have been taken from the milk of nearly 3,000 shippers into Baltimore. A new system of checking all reports before going out and of re-checking the tests which appear abnormal has resulted in a decrease in the number of complaints and an increased confidence in the service.

Work with Breeders of Maryland.

During the past year we have supervised the making of 2,592 tests of pure-bred cattle for advanced registry in Maryland. Of this number, 968 were Guernseys, 934 Jerseys, 664 Holsteins and 36 Ayrshires. This number shows that but 4 per cent of our Guernseys, 3 per cent of our Jerseys, 2 per cent of our Holsteins, and 3 per cent of our Ayrshires are on official yearly tests. A monthly news letter has been sent out to all breeders of pure-bred cattle conducting or likely to conduct advanced registry work. Several letters have been received from dairymen complimenting the institution on this monthly service.

General Field Meetings.

Mr. Gamble reports attending 12 meetings and 7 conferences, at which talks were given on subjects relating to the care, feeding and management of dairy cattle and the better handling of dairy products. There were approximately 6,000 people in attendance at these meetings.

Present Situation.

Maryland, so far as the dairy industry is concerned, is in a most strategic position at the present time. The dairy industry of the State is organized on a market basis. This is developing a tendency for stabilized prices and practices and should enable educational agencies the more readily to work with groups rather than individuals. Future successes depend entirely upon whether or not the industry generally may be led to practice better care of the products and the better feeding of better cows to such a degree as will enable the industry to take full advantage of its present position. Mr. Gamble feels that the future of dairying in Maryland is bound up with better quality and economic production. This supersedes all natural advantages accruing from the following:

1. A home market still buying in annually over $10,000,000 worth of dairy products from outside the State.
2. Excellent transportation facilities.
3. A long season for the growing of corn and legume hays so essential to economic production.
4. Nearness to good markets both within and without the State.

I have given an unusually lengthy discussion to the dairy industry but it was thought wise to present in rather detailed form the splendid progress that has been made by all forces of the Service and Institution in close co-operation with the co-operative dairymen's associations.

RURAL ORGANIZATION AND MARKETING.

The Assistant Director, Dr. F. B. Bomberger, serves as specialist in charge of this project. August 1st we were able to co-operate with the College of Agriculture in the employment of Dr. S. H. De Vault, who serves as a part-time specialist in marketing.

Dr. Bomberger reports that the increasing demands of administration and in the supervision of agents have handicapped his efforts in promoting the work of organization and marketing. It is obvious that he is carrying too heavy a load and it is hoped that funds will be available in the future to divide the work more equitably.

Rural Organization.

The specialist reports that during the past year his work has been complicated by the movement to convert the existing system of county and community organizations into a Farm Bureau system. While there has been a Farm Bureau in Montgomery county for three years, it was not until last August that Washington county decided to put on a $10 membership drive which was very successful. This was followed by similar drives in Frederick and Anne Arundel counties. In September, the council of the Agricultural Society endorsed the movement on a $10 basis, the Society having previously recommended a $2.00 basis, and an effort is being made to have all of the counties organize on this basis.

In this movement for more efficient county and State organization, the Extension Service has co-operated in an educational and advisory capacity through specialists and agents. The matter of deciding upon the type and form of organization desired in any county has been left to the farmers of the county, but once the question has been decided, every legitimate aid has been extended by the Extension Service in order to facilitate the reorganization.

A complicating factor in the situation is the obvious necessity of reorganization of the Maryland Agricultural Society, which hitherto has served as the medium for uniting the county federation of community organizations and the State-wide educational and co-operative farmers organizations.

It is hoped that the reorganization of the State society will be upon such a basis that it will continue to provide harmonious co-ordination of all the organization movements of rural people in the State. The specialist has assisted in this movement as far as possible.

The Western Maryland Fruit Exchange.

In the early months of 1922, the fruit growers of Allegany, Washington, Frederick and Carroll counties expressed a desire to organize a co-operative fruit marketing organization. Plans of organization were prepared by the extension specialist in marketing in co-operation with Mr. S. B. Shaw, orchard specialist, and preliminary meetings were held for the formation of the exchange and the local packing houses which were to be tributary to it. Unfortunately the freezes and frosts of April destroyed a large portion of the fruit crop and the plans for organization were temporarily laid aside. One local packing unit was established and this is expected to serve as the nucleus for organization activities next spring.

County fruit growers' associations were established in Allegany and Carroll counties.

There is a real need for a co-operative selling organization of fruit growers and all interested are hopeful of completing the formation of the Fruit Exchange in 1923.

The Wicomico Farmers' Association.

This organization in 1921, for various reasons, failed to realize for its members the benefits they believed possible. Assistance of the county agent and specialist in horticulture aided by demonstrations in proper method of picking, grading and packing with better business methods, have improved the situation and the condition of the organization. Up until September, the gross volume of business conducted by the association amounted to nearly $300,000. Since then 14,800 bushels of sweet potatoes have been sold by the association.

Maryland-Virginia Milk Producers' Association.

The specialist reports that owing to the disordered conditions in the milk market of the District of Columbia, it became necessary to

consider the reorganization of the Maryland-Virginia Milk Producers' Association which is a co-operative marketing organization of farmers of Maryland and Virginia who produce milk for sale in Washington, D. C. This necessitated a change in management and the substitution of a new marketing contract to be signed by the members.

In the consideration of the form of the contract and the plan of organization of the local and county units, the extension specialist in marketing and the extension specialist in charge of market milk investigation worked with the board of directors of the association to the end that a satisfactory plan has been finally evolved and is now being put into operation. With a better plan of organization and good business management, this association should prove to be of incalculable benefit to the dairymen who produce for the Washington market.

Small Fruits and Truck Crops.

In this line of work, the effort has been towards extending practices which in the past few years have shown their value to the growers of these products on the Eastern Shore. In handling strawberries, cantaloupes and cucumbers particularly, the auction block method of selling the products has proven highly satisfactory. Rigid standardization of farm products and sale through a co-operative sales agency, by means of an auction block would go a long way towards solving the marketing problem of many of our Maryland truck crops and small fruits.

The Agricultural Corporation.

During the fall of 1921, a committee of the Agricultural Society was appointed to consider forming a State-wide buying organization for farmers. As a result, the Agricultural Corporation was formed and began operating in the spring of 1922. The plan did not have the support of many of our counties and as a result, the business transacted did not provide sufficient funds for over-head costs. A curtailment of expenses was effected by the officers and executive committee in August and since that date, the corporation has been able to maintain its own. It is hoped that the county farm bureaus and the State organizations will use this corporation for the co-operative purchase of farm supplies.

Co-operative Buying and Selling by Farmers.

Every effort has been made by the specialists and agents to promote co-operative action by farmers. In order to secure better breeder cattle, farm bureau members of Washington, Frederick and Montgomery counties pooled their orders and employed a buyer to visit the western ranges to purchase the cattle direct. Thirty-three car-loads of very good stock were purchased. The specialists advised with Mr. E. P. Cohill, who was instrumental in promoting this project.

An effort will be made to organize livestock shipping associations to sell these and other stock. As reported elsewhere, the county agents give a total of $570,368.33 of farm supplies purchased cooperatively and a total of $3,961,503.09 of farm products sold cooperatively at a saving of $748,094.54 to the farmers.

Investigation of the Baltimore Markets.

During the past summer, Dr. De Vault was able to carry on an investigation covering the conditions prevailing on the Baltimore markets for perishable products. He has been successful in gathering valuable data which will serve as a basis for certain constructive recommendations now being formulated relative to the betterment of marketing conditions in this field.

Among the evils requiring remedy, Dr. De Vault indicates the following:

1. Lack of adequate market space for farmers' wagons and trucks.
2. Unnecessary hardships resulting from too early hours of opening market.
3. Lack of adequate supervision of the market and marketing practices.
4. Lack of a requirement that commission merchants in every case give to the producer a sales ticket showing the exact facts relating to each transaction.
5. Lack of requirement that sales tickets be binding on the commission merchant.
6. Lack of standard accounts of sale.
7. Permitting commission merchants to buy for their own account without notice to the producer.
8. Lack of standardization of grading and packing of farm products.
9. Lack of any agency to supply adequate market information, supervision of accounts of commission merchants and buyers, or the bonding of such agents.

Many other important faults with the present system were discovered through these investigations. As a result, through the Director of Extension, a conference was arranged between a committee composed of representatives of the Maryland Agricultural Society, the Merchants and Manufacturers Association, of Baltimore, and the Extension Service for the consideration of these and other questions of interest to both rural and urban Maryland. After one meeting of the committee as a whole, a sub-committee was appointed which considered each of these problems in detail. In order that the entire marketing problem might be graphically projected, the sub-committee prepared a chart showing present practices, with suggested remedies, in connection with the production and marketing of all of the principal farm products of Maryland from the time they are produced until they reach the consumer. Thus the chart shows a product as it is handled successively by the farmer; the transportation agency; the storage warehouse; the commission man, wholesaler, jobber and other dealers; the retailer and the consumer. In addition it shows what municipal and state agencies may do to remedy existing conditions. This is believed

to be the first time that a chart covering the entire field of marketing the farm products of the State has been produced. A great deal of the labor of producing the chart devolved upon Dr. De Vault. The chart will be used as a basis for making certain definite recommendations to the Maryland Agricultural Society and the Merchants and Manufacturers Association with the expectation that joint recommendations will be made by these bodies for municipal and State legislation where such action is needed.

Our Marketing Needs.

As revealed through investigational work and the chart, there is great need for a State-supported agency charged with the responsibility of helping solve the marketing problems enumerated. The funds available at present do not permit the employment of a full-time marketing specialist to carry on the work of making necessary marketing investigations, disseminating market information, concerning supply and demand, prices etc., the enforcement of standard grades and containers for farm products, inspection of car-lot shipments at point of origin and at destination; inspection and supervision of accounts of commission merchants and perhaps the bonding and licensing of dealers in farm products. Many other problems incident to the foregoing are demanding attention. It cannot, therefore, be too strongly urged that funds be provided from some source to enable the State, preferably through an agency associated with the Extension Service, to undertake this most important and urgent work.

Miscellaneous.

Dr. Bomberger has represented the Service at several national conventions, such as the Country Life Association, meeting last October in New York; and the National Association of State Marketing Officials, meeting in Chicago early in December. It is gratifying to report that Dr. Bomberger was selected president of the National Association of State Marketing Officials. This organization is doing good work in correlating the work of the various marketing agencies in the country. He also represented the Service at the important meeting held in Washington recently, looking towards the formation of the National Council of Co-operative Marketing Associations.

The specialists report the following summary of activities.

Miles traveled by auto	5,186
Miles traveled by train or boat	7,324
Total miles traveled	12,510
Letters written	1,864
Copies of circular letters issued	5,319
Visits to agents	78
Meetings attended	113
Addresses delivered	59
Attendance at meetings	13,560
Average attendance at meetings	120

Poultry Extension Work.

Mr. W. H. Rice was appointed poultry specialist effective October 23, 1922. Mr. Rickey, the former specialist, resigned January 1, 1922 but due to lack of funds last spring we were unable to appoint a successor until July 1st. Delay was then occasioned in securing the right man. As a result, very little was done in poultry extension, except to carry on the work in progress. Mr. Waite, specialist of the Experiment Station, rendered able service in meeting emergency demands.

Mr. Rice reports spending the greater part of his time thus far in visiting the county agents and home demonstration agents, for the purpose of studying conditions on which to base a plan of work during 1923.

There has been an unusual interest developed in poultry in Maryland and it will be our purpose to push this industry as much as possible on account of its great possibilities in Maryland. The specialist reports writing 38 letters, making 11 visits to poultrymen to give assistance, sending out 110 bulletins and traveling 1507 miles.

Entomology.

Mr. E. N. Cory, State Entomologist, serves as part time specialist in this subject for the Service. Mr. W. C. Travers, formerly assistant in demonstration work and inspection, died last January. Mr. Travers rendered an unusual service to the State and Institution for twenty years. His loss was a severe blow to all of his associates in the State horticultural work in the State.

Owing to the death of Mr. Travers, a reorganization of the extension work was made whereby all of the orchard projects were transferred to the leadership of the specialist in horticulture, Mr. Shaw, under the terms of a general project, whereby the pathologist and entomologist would help to plan the method of procedure in each orchard demonstration after a personal visit, in company with the county agent and horticulturist. Details of these projects and results obtained are reported under the project of horticulture. Mr. Cory reports that the plan has worked admirably and will be followed in the future. Difficulty was experienced in securing a successor to Mr. Travers. Finally, two recent graduates were selected as part time assistants. Two principal projects have been pursued; promoting better beekeeping and the control of the pea aphis.

Beekeeping.

The beekeeping project had in view an increase in the number of beekeepers, instructing them in better methods, the organization of the industry, co-operative efforts in buying and selling and the dissemination of information.

As secretary of the State Beekeepers' Association, Mr. Cory has rendered good service to the association and it has served as the medium for the improvement of the industry. Monthly meetings

during the winter and four summer meetings were held. Creditable exhibits have been made at county fairs.

Control of Pea Aphis.

The pea aphis threatened such serious injury to peas in Anne Arundel county and the Eastern Shore that plans were made to conduct demonstrations for the control of the pest. Visits were made in conjunction with the several county agents and dusting and spraying demonstrations were put on in Anne Arundel and Dorchester counties. Seven demonstrations in using nicotine dust were conducted. The work showed that the aphis could be controlled on peas sown in the row by using 5% nicotine dust at a cost of $8.50 per acre for two applications. An increase of over 300% in the number of pods was obtained on dusted fields as compared with the checks. Many fields of peas that were not dusted were destroyed entirely by the insect.

Miscellaneous Orchard and Other Work.

Demonstrations were conducted in the use of paradichlorobenzene for the control of the peach tree borer, the European red mite and the black peach aphis.

Forty-one thousand trees, mostly five years old or older, were treated in one county with paradichlorobenzene under the directions of the specialist. Complete success attended this application for the control of the peach tree borer. The European red mite was controlled by spraying with scalecide.

The use of calcium caseinate was demonstrated in fifteen orchards. The addition of this material to apple sprays showed excellent results in spreading the sprays and seems to be an economical orchard practice.

The entomologist reports that the rosy apple aphis was very numerous all over the State and that special efforts were made to control it. The angoumois grain moth caused more loss to wheat growers this year than usual. Reports of injury began to come in from all sections of the State about August 15th. Every effort was made to give information for the control of the pest and advice concerning future practice.

Mr. Cory submits the following summary:

Miles traveled by train	4,316
Miles traveled by boat	525
Miles traveled by auto	2,234
Meetings attended	34
Lectures delivered	12
Demonstrations	30
Press Articles	8
Information cards and posters published	7
Circulars sent out	5,919
Personal letters written	1,634
Orchards inspected	51

Apiaries inspected	12
Exhibits judged	1
Nurseries inspected	15
Greenhouses inspected	6
Number of days in field	89

Plant Pathology.

Dr. R. A. Jehle, serves as full time specialist in this project. Mr. C. E. Temple, State pathologist, devotes a limited time to extension work.

The county and home demonstration agents aided in carrying out the demonstrations in the field.

Control of Cantaloupe Diseases.

Dr. Jehle reports conducting five demonstrations for the control of cantaloupe blight in Caroline county, six in Dorchester county and one in Wicomico county. Saunders dust was used and also Bordeaux mixture for this work. While the season was very unfavorable the demonstrations were very successful. The yields were 200 crates of cantaloupes per acre, which were very good in comparison with yields from unsprayed and undusted vines. The results from the dusting demonstrations varied with the method and number of applications. The cantaloupe crop is an important one on the Eastern Shore and it is gratifying to report good progress being made in the improvement of the quality and yield due to better methods of culture.

Control of Corn Root Rot.

The specialist has devoted more time to demonstrations with this crop than any other. This disease is annually causing severe losses to the growers of sweet and field corn in Maryland. The estimated loss from this disease in Maryland during the year 1921 was 10%, or approximately 2,515,500 bushels, valued at more than one million dollars. Demonstrations for the control of root rot were conducted in co-operation with the department of agronomy and county agents in the following counties:

Allegany 5; Baltimore 3; Caroline 3; Carroll 4; Cecil 4; Charles 5; Dorchester 3; Harford 3; Kent 2; Prince Georges 4; Queen Annes 3; St. Marys 3; Somerset 9; Talbot 5; Wicomico 2; Worcester 2.

The seed for the demonstration plots was selected from corn which the growers had selected for planting. This seed corn was divided into two lots according to the amount of root rot infection which could be observed in the ear. The corn from the ears which showed little or no evidence of root rot was planted in the same field beside that from the ears which showed marked evidence or root rot infection. These plots were located on the most uniform land available and were fertilized and cultivated in the same manner.

From a careful study of the detailed reports from all these demonstrations it was seen that the corn from cobs which showed

little or no evidence of root rot gave the larger yield in all but four cases and in these cases other factors entered into the results.

This work will be continued as it is one of the most important pathological problems in the State measured in terms of value to the growers.

DEMONSTRATONS IN SELECTING SEED CORN NOT AFFECTED BY ROOT ROT HAVE SHOWN STRIKING INCREASES IN YIELD.

Control of Irish Potato Diseases.

Eight demonstrations for the control of potato scab with the use of inoculated sulphur were conducted in Somerset County and 17 in Worcester County.

Two demonstrations for the control of late blight by spraying with Bordeaux mixture and dusting with Saunders dust were conducted in Garrett County.

The specialist reports that potato growers who used Western Maryland certified seed potatoes found this superior to the Maine uncertified and some Maine certified seed. More than 6,000 bushels of Western Maryland seed potatoes were inspected and certified by the department. A number of fields of late potatoes, mostly McCormick were inspected in Somerset, Howard and Baltimore counties. In most of the McCormick fields from 10 to 25 per cent. of the plants were found to be severely infected with the Mosaic disease. This presents a problem that must be attacked in the State.

Orchard Demonstrations.

Orchard management demonstrations were conducted in co-operation with the departments of horticulture and entomology and the county agents as follows: Caroline County 2; Talbot County 4; Worcester County 5. These demonstrations involved spraying with various remedies for control of diseases and insects. The results were very satisfactory where the orchards were thoroughly sprayed at the proper time.

The specialists report the following summary:

Days in office	133
Days in field	230
Meetings and conferences attended	33
Meetings addressed	7
Attendance at above	342
Number of letters written	685
Specimens identified	385
Number of demonstrations conducted	139
Number of plant disease exhibits at fairs and meetings	3
Number of nurseries inspected	24
Farms and gardens visited	1,911
Demonstrations visited	283
Number of miles traveled by auto	6,108
Other travel	10,959
Total number of miles traveled	17,067

Agricultural Engineering.

Mr. Ray W. Carpenter serves as a part-time specialist in farm engineering work. He reports that the principal demand has been for drainage work. Unfavorable financial conditions on the farms have limited the work in rural architecture and home conveniences very materially. Excessive freight charges on tile have reduced the number of drainage projects. During 1922 the specialist reports originating nine demonstrations in drainage and three in rural architecture. The demonstrations require a considerable financial outlay on the part of the farmer. For this reason some of these demonstrations will not be completed until 1923. All completed work has met with excellent success.

The specialist has made 30 farm visits with agents in response to requests from farmers. It is hoped that conditions will enable the farmers to do much more in the way of farm improvements in 1923 than during the past two years.

General Educational Extension.

Mr. C. S. Richardson, in charge of this project, reports that during the past twelve months the work embracing four branches, lectures, motion pictures, correspondence courses and high school public discussion leagues, has continued to progress along the usual lines.

Lectures.

This department furnishes lectures when the character of requests does not place them under the jurisdiction of any of the agricultural specialists. Splendid assistance has been rendered by the specialist in meeting as many engagements as his duties will permit. He has delivered 25 public addresses with an attendance of 8,000.

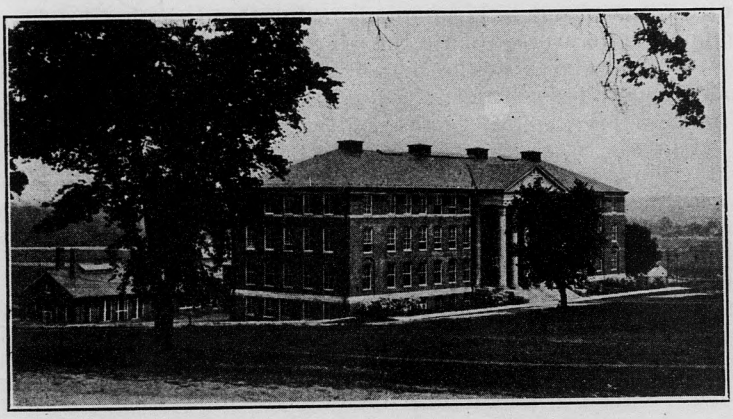
Motion Pictures.

A limited number of motion picture films are held for distribution to rural community centers throughout the State and orders or requests for films are submitted to the United States Department of Agriculture. The distribution of pictures among rural people has been of great educational value and it is regretted that limited funds have prevented securing a suitable supply of films. It is hoped that we may be placed in position to meet the increasing demand of rural sections for this class of entertainment and instruction.

Prof. Richardson submits the following summary of film distribution:

Average of reels on hand for distribution	75
Total number of films exhibited	250
Total number of persons in attendance	20,000
Pictures not held by us but ordered for our patrons from United States Department of Agriculture and other sources	125
Approximate number of persons in attendance	15,000

The service is greatly indebted to the Department of Agriculture for the assistance it has rendered in the supply of films. We would have been greatly embarrassed had it not been for this supply.



THE UNIVERSITY OF MARYLAND BELONGS TO THE PEOPLE OF THE STATE.

Correspondence Courses.

The specialist reports that owing to the lack of facilities for conducting the correspondence work, only a limited amount of activity in this phase has been undertaken. The following courses have been offered—English; Fertilizers; Farm Poultry; Beekeeping; Farm Machinery; Farm Dwelling Construction; Dairy Farming and Vegetable Gardening. With increased facilities for this work, other courses could be added and a general stimulation secured for this im-

portant work. It would be a very easy matter to interest several hundred earnest and capable students in correspondence classes. It is believed such a course, however, would be unwise until suitable lessons are available. Plans are now under way to provide for a revision of such courses as are on hand and it is hoped that new courses may be added as time and opportunity permit. While only a small number of new pupils have been enrolled during the year, it is believed many more could be enrolled as there is a splendid field for work of this character.

High School Public Discussion League.

This work was organized three years ago and from a small beginning, it has developed into a dignified and valuable institution. It now enjoys the hearty support and co-operation of the State Department of Education and is considered by the State Superintendent of Education as a most valuable adjunct to his high school work.

During the past year the students in the 69 approved high schools carefully and thoroughly studied a subject involving a great problem in the industrial world—"The Open and Closed Shop"—and organized and presented in a public debate their information and conclusions in the form of definite arguments. As the people of the communities turned out in large numbers to attend the local debates, it is impossible to over-estimate the educational value of this work, not only to the students of the schools, but to the thousands of adults who attended the meetings.

This is a very popular phase of the Extension Work being conducted in the State and the growth it has enjoyed is viewed with satisfaction. It is hoped that when the condition of extension finances makes it possible a special appropriation can be made for this work on the basis of a regular budget. Every cent so appropriated should be made to bring in large returns in the social and intellectual advancement of the people of the State.

Mr. Richardson reports writing 1019 letters and issuing 2459 mimeographed letters and circulars.

A very limited budget is now devoted to the general educational extension work. The field presents an opportunity for great development and service to the people of the State.

Co-Operation with Southern Maryland Immigration Commission.

The authorization for the Southern Maryland Immigration Commission by the last legislature provided funds for promoting land opportunities in this splendid section of our State. The Extension Service has given every possible assistance to the commission in inaugurating and developing its work. With the headquarters of the commission at the University, the close association of the executive secretary with our specialists and agents enables the commission to utilize the information and facilities of the Service.

The Extension Service continues to receive many letters of inquiry regarding available farming opportunities in Maryland. Every facility is afforded prospective immigrants to locate in the State.

Miscellaneous Work.

In addition to the regular project work outlined, there is a great amount of general extension work conducted by specialists of the College of Agriculture and Experiment Station who help our forces in emergencies. A splendid spirit of co-operation exists between all departments of the Institution. Among those who have assisted in Extension Work are: Prof. J. E. Metzger, Agronomy; Dr. A. G. McCall, Soils; Dr. De Voe Meade. Animal Industry; Dr. E. N. Pickens, Bacteriology; Dean P. W. Zimmerman, and Prof. W. T. L. Taliferro, Farm Management. The Service acknowledges its appreciation of co-operation which these men have given in meeting the calls made upon them.

Fairs.

The Service has made exhibits at various agricultural fairs over the State. We have been seriously handicapped for funds to make suitable exhibits. The budget for 1923 provides a small allotment for this purpose but full advantage should be taken of the opportunity for education and dissemination of information at State and

COMMUNITY BOOTH EXHIBITS HAVE BECOME ATTRACTIVE AND INSTRUCTIVE FEATURES OF MANY AGRICULTURAL FAIRS.

county fairs. We should have a department of exhibits with men in charge, whose sole business would be to prepare and make attractive and educational exhibits at fairs.

The Service co-operated with all forces at the Institution in making exhibits for Farmers' Day.

The Service is indebted to Dr. H. J. Patterson, director of the Experiment Station for his cordial assistance and advice in all undertakings of mutual concern.

Conclusion.

I have thus endeavored to give a general outline of the activities of the Extension Service for the past year. This discussion of the work is quite extensive and yet it does not cover adequately the accomplishments of the agents and specialists. Many of the county agents' reports are models in presenting in a comprehensive manner the progress made in the county during the twelve-month period.

We have a splendid force of men and women in the Service who are devoting their utmost energy and skill to render service to their constituents. In fact in several instances I am convinced that some of our members are seriously neglecting their personal well-being to meet the demands of their people. I am under many obligations to all the members of the Extension staff and especially to Assistant Director Bomberger and the office force for the splendid support and co-operation they have given me in directing the work of the Service.

The relationship between the co-operative extension forces of the State and nation are most satisfactory. Every assistance has been rendered by the United States Department through its bureaus and the States Relations Service.

The general conditions for extension work in the State are favorable and the outlook is good. The farmers and home-makers of the State have given every encouragement and co-operation in prosecuting the work. During the past six months extensive drives for organization of farm bureaus have been conducted in several counties with success. These more effective county organizations should afford additional opportunity for carrying forward extension programs, more efficiently in the future. They will also encourage better business methods to be practiced in the selling of farm products. This increased interest in co-operation among farmers will undoubtedly react to the advantage of all concerned. No State offers greater opportunities for the development of its agricultural resources than Maryland and it will be the aim of the Service in the future as in the past to render all possible service in developing the State's agricultural potentialities.

The director and members of the extension staff are deeply appreciative of the interest and cordial support given to our every undertaking by President A. F. Woods. We are also indebted to Dr. A. C. True and Dr. C. B. Smith, of the States Relations Service of the United States Department of Agriculture, for their encouragement and support.

FINANCIAL REPORT FOR FISCAL YEAR ENDING JUNE 30, 1922. IN ACCOUNT WITH THE UNITED STATES AND STATE APPROPRIATIONS UNDER SMITH-LEVER EXTENSION ACT, 1921-1922.

		Smith-Lever Funds.		
		Total.	Federal.	State.
Dr.				
Unexpended balance from 1920-1921		$166.52	$83.26	$83.26
To receipts from the Treasurer of the United States and from State sources as per appropriations for fiscal year ended June 30, 1922, under act of Congress approved May 8, 1914, (Smith-Lever Act)		124,986.78	67,493.39	57,493.39
Cr. Abstract				
By salaries	1	109,647.58	60,126.48	49,521.10
Labor	2	550.00	550.00	.....
Printing and distribution of publications	3	1,934.99	208.77	1,726.22
Stationery and small printing	4	1,582.64	1,048.57	534.07
Postage, telegraph, telephone, freight and express	5	513.47	122.78	390.69
Heat, light, water and power	6	360.00	360.00	.....
Supplies	7	246.81	206.48	40.33
Library	8	42.26	22.67	19.59
Tools, machinery and appliances	9	22.06	18.50	3.56
Furniture and fixtures	10	947.00	894.19	52.81
Scientific apparatus and specimens	11	28.65	13.85	14.80
Live stock	12	.....	.....	.....
Traveling expenses	13	9,277.84	4,004.36	5,273.48
Contingent	14	.....	.....	.....
Unexpended balance		.....	.....	.....
Total		$125,153.30	$67,576.65	$57,576.65

SUMMARY STATEMENT OF EXPENDITURES, BY PROJECTS, SHOWING SOURCES OF FUNDS USED FOR EXTENSION WORK.—FISCAL YEAR ENDING JUNE 30, 1922.

	Total	Smith-Lever		State	County
		Federal	State		
Administration	$ 26,581.96	$ 12,364.11	$ 11,704.37	$ 2,513.48	$ .....
Printing and Distribution of Publications	2,454.59	208.77	1,726.22	519.60	.....
County Agent Work	94,176.74	33,083.71	21,352.83	16,743.70	22,996.50
Home Demonstration Work	44,340.95	11,514.36	8,033.95	15,410.47	9,382.17
Boys' Club Work	4,969.27	932.43	3,737.66	299.18	.....
Agronomy	3,944.85	790.13	2,677.10	477.62	.....
Animal Industry	3,610.61	900.32	2,498.62	211.67	.....
Horticulture	6,485.44	3,338.38	2,806.41	340.65	.....
Dairying	3,657.97	2,440.07	1,002.80	215.10	.....
Rural Organization and Marketing	1,283.58	.....	1,189.19	94.39	.....
Poultry	1,236.31	182.96	847.50	205.85	.....
Forestry	.....	.....	.....	.....	.....
Entomology	4,956.04	591.45	.....	4,364.59	.....
Pathology	4,174.39	1,229.96	.....	2,944.43	.....
General Educational Extension	1,265.35	.....	.....	1,265.35	.....
Total expenditures	$203,138.05	$ 67,576.65	$ 57,576.65	$ 45,606.08	$ 32,378.67
Unexpended balance	.....	.....	.....	.....	.....
Total	$203,138.05	$ 67,576.65	$ 57,576.65	$ 45,606.08	$ 32,378.67

SUMMARY OF EXPENDITURES BY PROJECTS SHOWING CLASSIFICATION OF EXPENDITURES FROM ALL

Total	$203,138.05	$ 67,576.65	$ 57,576.65	$ 45,606.08	$ 32,378.67

SUMMARY OF EXPENDITURES BY PROJECTS SHOWING CLASSIFICATION OF EXPENDITURES FROM ALL FUNDS USED FOR EXTENSION WORK, (EXCEPT THOSE FROM U. S. DEPARTMENT OF AGRICULTURE).—FISCAL YEAR ENDING JUNE 30, 1922.

Items of Expense	Total	Administration	Printing and Distribution of Publications	County Agents	Home Demonstration Work	Boys' Club Work	Agronomy	Animal Industry
Salaries	$151,655.85	$ 20,813.85	$	$ 72,700.72	$ 31,283.37	$ 3,760.00	$ 2,900.00	$ 2,966.66
Labor	566.50	556.50		10.00				
Printing and Distribution of Publications	2,454.59		2,454.59					
Stationery and Small Printing	2,233.61	1,948.29		1.25				
Postage, telegraph, telephone, freight and express	1,208.89	1,015.70		6.12	.60			
Heat, light, Water and power	360.00	360.00						
Supplies	4,590.93	362.34		4,211.63				
Library	194.05	191.55						
Tools, machinery and appliances	279.09	276.34						
Furniture and fixtures	967.33	967.33						
Scientific apparatus and specimens	54.07	54.07						
Live stock								
Traveling expenses	38,545.14	22.99		17,247.02	13,056.98	1,209.27	1,044.85	643.95
Contingent expenses	28.00	13.00						
Total expenditures	$203,138.05	$ 26,581.96	$2,454.59	$ 94,176.74	$ 44,340.95	$ 4,969.27	$ 3,944.85	$ 3,610.61

SUMMARY OF EXPENDITURES BY PROJECTS, SHOWING CLASSIFICATION OF EXPENDITURES FROM ALL FUNDS USED FOR EXTENSION WORK (EXCEPT THOSE FROM U. S. DEPARTMENT OF AGRICULTURE) FISCAL YEAR ENDING JUNE 30 1922.

Items of Expense.	Horticulture	Dairying.	Rural Organization and Marketing.	Poultry.	Forestry.	Entomology.	Pathology.	General Educational Extension.
Salaries	$5,300.00	$2,966.66	$1,000.00	$972.50		$3,024.62	$2,980.00	$987.47
Labor								
Printing and distribution of publications								
Stationery and small printing								
Postage, telegraph, telephone, freight and express						284.07		
Heat, light, water and power						186.47		
Supplies								
Library						16.96		
Tools, machinery and appliances						2.50		
Furniture and fixtures						2.75		
Scientific apparatus and specimens								
Live stock								
Traveling expenses	1,185.44	691.31	283.58	263.81		1,423.67	1,194.39	277.88
Contingent expenses						15.00		
Total expenditures	$6,485.44	$3,657.97	$1,283.58	$1,236.31		$4,956.04	$4,174.39	$1,265.35

COUNTY HOME DEMONSTRATION AGENTS.

County.	Name.	Headquarters.
Allegany	Bessie M. Volk	Cumberland
Anne Arundel	Mrs. G. Linthicum	Annapolis
Baltimore	Mary Graham	Towson
Calvert		
Caroline	Emily Kellogg	Denton
Carroll	Rachel Everett	Westminster
Cecil	Elizabeth Hodgson	Elkton
Charles	Mrs. Elva S. Bohannan	La Plata
Dorchester		
Frederick	Elizabeth Thompson	Frederick
Harford	Anne Holbrook	Bel Air
Howard		
Garrett		
Kent	Susan V. Hill	Chestertown
Montgomery	Blanche A. Corwin	Rockville
Prince George's	Ellen L. Davis	Hyattsville
Queen Anne's		
St. Mary's	Ethel Joy	Leonardtown
Somerset		
Talbot	Mrs. Olive K. Walls	Easton
Washington	Susan Garberson	Hagerstown
Wicomico	Florence H. Mason	Salisbury
Worcester	Lucy J. Walter	Snow Hill

LOCAL AGENTS.

Southern Maryland	J. F. Armstrong (col.)	Seat Pleasant
Eastern Shore	L. H. Martin (col.)	Princess Anne
Charles and St. Mary's	Leah D. Woodson (col.)	La Plata

GARDEN SPECIALIST.

Baltimore City	Mrs. Adelaide Derringer	Administration Building, Madison and Lafayette Aves.

EXTENSION SERVICE BULLETINS.

The following bulletins are available for distribution and will be mailed free of charge to any address upon application.

No. 2—Relation of Lime to Agriculture.
No. 9—Electricity on the Farm.
No. 10—Improving the School Ground.
No. 11—Control of Insects and Diseases of Fruits and Vegetables.
No. 12—Rural School Lunch.
No. 13—Why We Can Food.
No. 14—The Seventeen-Year Locust.
No. 15—Milk Cost Survey, August, 1918.
No. 17—Boys' Corn Club Lessons.
No. 18—Maryland Invites You.
No. 19—Boys' Potato Club Lessons.
No. 20—High School Discussion League—Correspondence League. (Motion Picture Lectures).
No. 21—Sewing Club Lessons.
No. 22—Marketing Farm Products.
No. 23—Garden Flowers.
No. 24—Making Pigs Pay.
No. 25—The Brood Sow and Her Litter.
No. 26—Co-operative Association Law of Maryland.
No. 27—More Tomatoes from Fewer Acres.

THE SUN BOOK & JOB PRINTING OFFICE, INC.
BALTIMORE, MARYLAND.

Total expenditures..... | $6,485.44 | $3,657.97 | $1,283.58 | $1,236.31 | ..... | $4,956.04 | $4,174.39 | $1,265.35

SUMMARY OF EXPENDITURES BY PROJECTS, SHOWING CLASSIFICATION OF EXPENDITURES FROM ALL FUNDS USED FOR EXTENSION WORK (EXCEPT THOSE FROM U. S. DEPARTMENT OF AGRICULTURE) FISCAL YEAR ENDING JUNE 30 1922.

Items of Expense.	Horticulture	Dairying.	Rural Organization and Marketing.	Poultry.	Forestry.	Entomology.	Pathology.	General Educational Extension.
Salaries	$5,300.00	$2,966.66	$1,000.00	$972.50	.....	$3,024.62	$2,980.00	$987.47
Labor	.....	.....	.....	.....	.....	.....	.....	.....
Printing and distribution of publications	.....	.....	.....	.....	.....	.....	.....	.....
Stationery and small printing	.....	.....	.....	.....	.....	284.07	.....	.....
Postage, telegraph, telephone, freight and express	.....	.....	.....	.....	.....	186.47	.....	.....
Heat, light, water and power	.....	.....	.....	.....	.....	.....	.....	.....
Supplies	.....	.....	.....	.....	.....	16.96	.....	.....
Library	.....	.....	.....	.....	.....	2.50	.....	.....
Tools, machinery and appliances	.....	.....	.....	.....	.....	2.75	.....	.....
Furniture and fixtures	.....	.....	.....	.....	.....	.....	.....	.....
Scientific apparatus and specimens	.....	.....	.....	.....	.....	.....	.....	.....
Live stock	.....	.....	.....	.....	.....	.....	.....	.....
Traveling expenses	1,185.44	691.31	283.58	263.81	.....	1,423.67	1,194.39	277.88
Contingent expenses	.....	.....	.....	.....	.....	15.00	.....	.....
Total expenditures	$6,485.44	$3,657.97	$1,283.58	$1,236.31	.....	$4,956.04	$4,174.39	$1,265.35

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